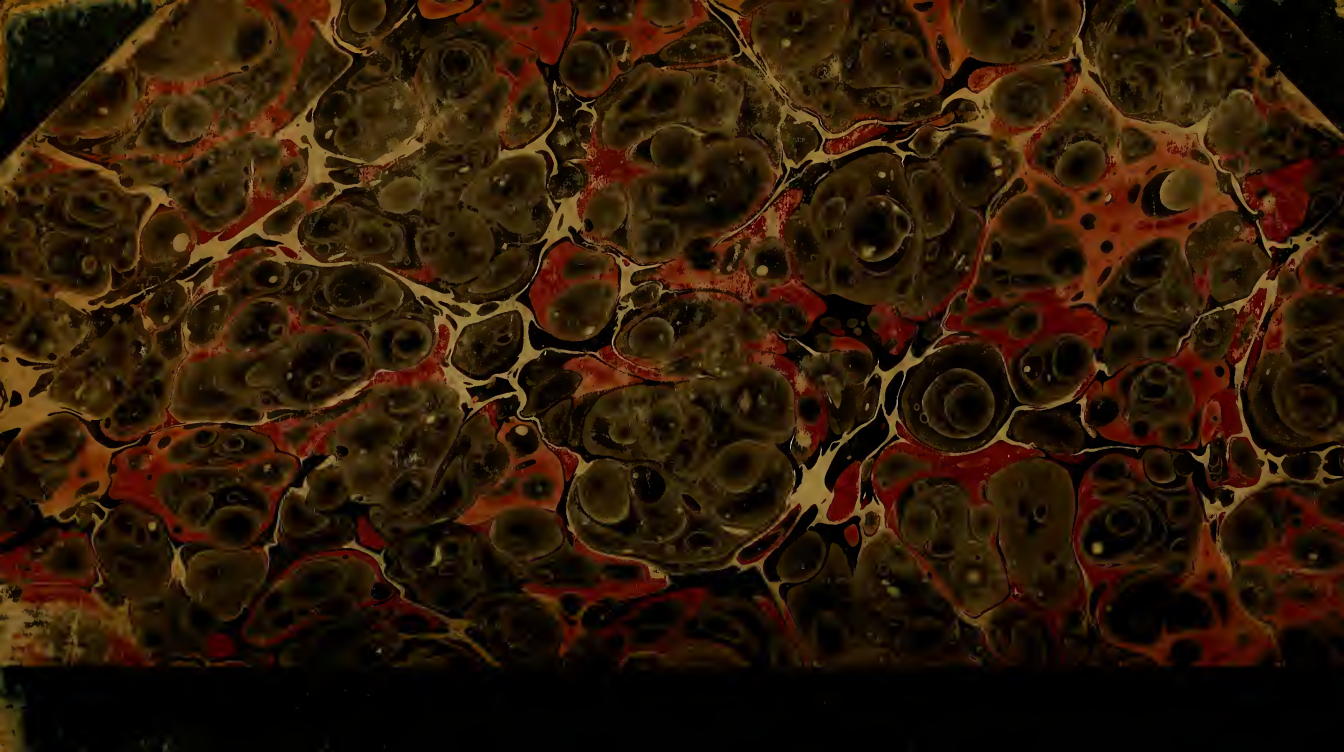

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By Frederic W. Prescott
Received May 24. 1854. No. 8845

MEDICAL DIRECTIONS

FOR THE USE OF

NAVIGATORS and SETTLERS

IN

HOT CLIMATES.

By THOS. M. WINTERBOTTOM, M.D.
Phyſician to the Colony at Sierra Leone.

What dire neceſſities on every hand
Our art, our ſtrength, our fortitude require!
Of foes inteſtine what a numerous band
Againſt this little throb of life conſpire!
Yet ſcience can elude their fatal ire
Awhile, and turn aſide death's levell'd dart,
Sooth the ſharp pang, allay the fever's fire,
And brace the nerves once more, and cheer the heart,
And yet a few ſoft nights and balmy days impart.

BEATTIE's *Minſtrel.*

SECOND EDITION.

LONDON:
PRINTED BY W. PHILLIPS, GEORGE YARD,
LOMBARD STREET.

1803.

TO THE

Chairman and Court of Directors

OF THE

HON. SIERRA LEONE COMPANY,

THE FOLLOWING

MEDICAL DIRECTIONS,

DRAWN UP AT THEIR REQUEST,

ARE

RESPECTFULLY PRESENTED

BY THEIR

OBEDIENT SERVANT,

THE AUTHOR.

MEDICAL DIRECTIONS, &c.

THE medical directions contained in the following pages were originally written at FREETOWN on the coaſt of AFRICA, for the uſe of ſuch trading veſſels in the ſervice of the SIERRA LEONE COMPANY as were unprovided with ſurgeons.

Having been favourably received, and applied, on many occaſions, with a beneficial effect, they are now preſented to the public under an enlarged form, with the hope that they may become more extenſively uſeful to Europeans, whoſe purſuits, in hot climates, often lead them into ſituations where medical aſſiſtance cannot be obtained.

The directions are purpoſely written in a plain, familiar manner: in order to render them more intelligible, and more eaſily applicable to practice, a few caſes have been added of perſons labouring under ſome of the diſeaſes deſcribed. Technical terms have been carefully avoided, and no expreſſions are uſed but ſuch as, it is preſumed, muſt be well underſtood by the generality of readers.

The methods of cure recommended are for the moſt

part such as the author found successful during his residence at Sierra Leone, where, for nearly four years, the health of more than fourteen hundred persons was entrusted to his care.

Europeans, upon their first entrance into a tropical country, are too apt to have their minds impressed with ideas of danger from the climate. The great increase of heat is the first inconvenience they experience, and in general that which they most dread; the excessive and often stifling heat of the nights being such as to make persons unaccustomed to it, apprehensive lest they should never be able to bear it. This dread of the effects of heat is however wholly unnecessary: strangers in a short time not only become reconciled to the greatest degrees of it, but even feel a chilliness and uneasiness when the air is a little colder than usual.

An eruption of what is called the PRICKLY HEAT, is generally the first sensible change produced on the body by a very warm climate: it consists of a number of small red spots, somewhat resembling flea-bites, and chiefly spread over those parts of the body which are covered by clothes, particularly the inside of the arms and thighs, the breast and forehead. This eruption is attended with a very troublesome itching, which is increased by warm liquids or warm clothing: the spots are also rendered more numerous by the same means. The Prickly Heat is always considered as a mark of health; and in consequence of this idea, many persons suffer great anxiety on its disappearance, or if they have not so extensive an eruption of it as their neighbours: hence they are induced to drink warm tea or punch, and use warmer clothing, which seldom fails to bring out a larger crop, and to make them

them uncomfortable from the violent itching connected with it. More attention is certainly paid to this eruption than it deſerves. A perſon affected with it is indeed generally in good health; but the ſkin may be full of it one minute, and the next ſcarcely exhibit a ſingle ſpot, without any material conſequences. The diſappearance of the eruption is an effect rather than the cauſe of internal diſorders; and its reappearance on their decline, is to be conſidered merely as a ſign of returning health. Some perſons have a greater quantity than others, without enjoying a better ſtate of health; ſome never have it at all, and yet continue perfectly well. The eruption becomes gradually leſs frequent, and for the moſt part wholly diſappears when a perſon has reſided a few years in the country. All the care it requires is to keep moderately cool, to avoid drinking warm liquors when the itching is ſevere, and occaſionally to take a very gentle doſe of ſalts.

Settlers in a tropical climate are uſually impreſſed with an opinion that they ſhould be bled ſoon after their arrival, eſpecially if they be troubled with a head-ach; but this I am convinced is unneceſſary, and moreover often dangerous, as it expoſes thoſe on whom it is employed to an attack of fever which they might otherwiſe have eſcaped. It may perhaps be deemed improper to lay down a general rule reſpecting this point: I think myſelf however juſtified by experience in aſſerting, that blood-letting ought never to be practiſed excepting where the lungs are affected with inflammation, a caſe which very rarely happens.

The great increaſe of the quantity of bile being another frequent cauſe of uneaſineſs, emetics are given on the firſt ſenſation of a bitter taſte in the mouth, or when any ſlight diſorder is felt in the ſtomach. This practice however proves nearly as dangerous as blood-letting, and is often

followed by irreparable miſchief. The beſt mode of proceeding is to truſt intirely to nature. Thoſe who never ſeek for bile, will perhaps never be troubled with it. In any caſe, a diſcharge of bile may be produced by giving a ſtrong emetic; but it ſhould be obſerved, that the bile ſeldom appears till towards the latter end of the operation, when the ſtraining or retching continues after the ſtomach has been emptied of its contents. An emetic repeated every day would always be attended with the ſame conſequences. If a perſon cannot be convinced that his ſtomach is free from bile, and if he feel a ſlight headach and uneaſineſs at the ſtomach, let him rather endeavor to carry the offenſive matter downwards, by taking a gentle doſe of ſalts, caſtor oil, or two or three of the purging pills.

The unpleaſant feelings above-mentioned moſtly ariſe from a coſtive ſtate of the bowels, a circumſtance which requires particular attention. Every perſon ought to have one or two evacuations in the day, and if inclined to coſtiveneſs he ſhould endeavour to overcome it by attention to diet, as by taking a larger proportion of vegetables, and by a moderate uſe of ripe fruits, as pine apples, oranges, plums, &c.

Another pernicious practice remains to be noticed, which is, the cuſtom of taking a doſe of bark, or bitters, every morning. This is done with an idea of preventing fever, and may have ariſen from the obſervation that perſons were more liable to be affected by the cauſe of Fever early in the morning than at any other time, which is undoubtedly true: ſtill the practice of taking bitters is not adviſable. An early breakfaſt is an equally ſure preventive; and medicines are only proper occaſionally, as for thoſe who are obliged to expoſe themſelves to the

morning

morning air with an empty ſtomach on wooding or watering parties. If they be taken conſtantly, the intended advantage is not only defeated, but in caſe of real ſickneſs, a much larger quantity of them than uſual becomes requiſite in order to produce any effect. Should theſe medicines taken in the morning be mixed with wine or ſpirit they act merely as a dram, and inſenſibly bring on the dreadful habit of drinking ſpirits: when mixed with water they are certainly leſs objectionable, yet are by no means ſo effectual as a breakfaſt taken early in the morning.

Smoaking tobacco is much recommended as a preventive of fever, eſpecially during the rainy ſeaſon; it is however a hurtful practice, tending to produce a conſtant thirſt and ſickneſs at ſtomach, which is only to be overcome by long practice, in the ſame way as a man may learn to eat hemlock without being affected by it. It likewiſe occaſions a great waſte of ſpittle, whence the ſtomach is deprived of a fluid neceſſary to digeſt the food: and very commonly a loſs of appetite follows. Beſides, tobacco ſmoke has no more effect in guarding againſt fever than the ſmoke of gunpowder, tar, oakum, &c. the ſuppoſed advantage of it being merely alleged as an excuſe for taking what cuſtom has rendered agreeable. Its benefits with regard to drying or purifying the air in houſes, might be obtained by burning the herb in a chafing diſh, &c. as no additional good effect is to be expected from drawing the ſmoke of it through the mouth, thoſe who ſettle in warm climates ſhould not be induced from miſtaken notions, to begin a practice ſo highly detrimental to their conſtitutions.

A ſudden change in diet from the uſe of animal food to that of vegetables, is a plan as improper as any hitherto

mentioned. Animal food may be taken once a day: it ſeems beſt to join with it a large proportion of vegetables: but in regulating this proportion every perſon muſt be left to his own prudence. Thoſe who have uſed a full diet in a colder climate may indulge a little more than others who have lived ſparingly. If they judge it proper to alter their plan, the change ſhould be very gradual. With regard to the particular articles of food, tea, coffee, chocolate or cocoa, with bread and butter or rice, make the beſt breakfaſt, and are indeed moſt in uſe. Beef, mutton, fowls, fiſh, &c. with yams, rice, and other vegetables, may be uſed for dinner. In general three meals a day will be found ſufficient; an early breakfaſt, a dinner about one o'clock, and tea or ſupper at ſun-ſet. Sometimes the appetite is ſo much weakened by ſickneſs, &c. that ſome ſlight refreſhment is requiſite between breakfaſt and dinner: this will depend however entirely upon habit. It is the cuſtom of the natives of Africa to uſe with their food a proportion of the red pepper, or capſicum, and it ſeems right to imitate their example; the ſtomach being ſo weakened by exceſſive perſpiration, that without ſomething warm, there is often not the ſmalleſt ſenſation of appetite for food.

With reſpect to drink, Madeira, Teneriffe, and Port wines are the beſt, either alone, or mixed with water. London porter is alſo very pleaſant and wholeſome: but as the perſpiration is ſo greatly increaſed, it is requiſite to uſe a larger proportion of fluids than in colder countries, in order to ſupply the waſte; for which purpoſe ſpruce beer, eſpecially when briſk, is one of the moſt agreeable drinks. Water alone does not

quench

quench the thirſt, nor is it adviſable to drink it ſo, eſpecially for thoſe who have been previouſly accuſtomed to ſomething ſtronger. Punch and lemonade, though very agreeable, are not ſo wholeſome as ſpruce-beer. Spirits, in every form and however reduced by water, are bad. Acids are grateful and very effectual in quenching thirſt; yet a continued uſe of them weakens, and very much injures the ſtomach. In ſhort, moderation in eating and drinking, though of the utmoſt importance to the preſervation of health, can only be recommended in general terms, which muſt be adapted by each individual to his own caſe and circumſtances. By temperance and care many perſons remain free from harm in the moſt unfavourable ſituations; whereas an irregular diet, and fits of intoxication, often ſuddenly bring on diſeaſes, or render previous complaints inveterate, which would otherwiſe have been of little conſequence. There is a ſaying, that nothing can hurt a drunken man: it is however certain, that as ſoon as the effects of liquor ceaſe, his conſtitution becomes much more liable to be affected by diſeaſe than it was before. Several inſtances may perhaps be found of perſons, who, during a long reſidence on the coaſt of Africa, have been intoxicated as often as they could procure liquor, and yet retained a tolerable ſtate of health; but the many thouſands who have periſhed by inconſiderately following the ſame practice, have never been taken into the account.

The clothing ought to be light, but ſufficiently warm to guard againſt ſudden changes from heat to cold. Cotton and flannel are the beſt articles for dreſs. Short jackets, with trowſers reaching to the ancles, and faſtened by ſtrings or buttons, are moſt convenient: where ſtock-

ings are not worn, ſocks ſhould be uſed in their ſtead; the practice of going without ſhoes is highly improper. Hats with high crowns, or with a handkerchief put in them, are of great ſervice in protecting the head from a hot ſun. The uſe of flannel next the ſkin cannot be too ſtrongly recommended; for although the firſt wearing of it may produce ſome trifling inconveniences, ſuch as, an itching in the ſkin, and an increaſed eruption of the prickly heat, yet theſe ſeldom laſt longer than a few days. By conſtant uſe, the wearing of flannel becomes remarkably pleaſant, and to it many perſons are indebted for the preſervation of their health and lives in very hot climates. Being defended with flannel, they have ſuffered no inconvenience, even when expoſed to the tropical rains for whole days and nights in open boats, or in the woods; while others, neglecting to uſe the ſame precaution, were preſently after ſeized with fevers. During the rainy ſeaſon, the air often feels raw and chilly; and the changes from heat to cold are more ſudden than at other times: but although the good effects of flannel are then more apparent, it is nevertheleſs extremely beneficial in the dry ſeaſon alſo; after violent perſpiration a linen or cotton ſhirt becomes wet and always cold to the back, which never happens when flannel is worn. Any conſiderable alteration of the temperature of the air requires a proportionate change in the dreſs. Thoſe eſpecially who are expoſed to the night air ſhould put on additional clothing. In the rainy ſeaſon, woollen clothes will be found both comfortable and neceſſary. It is a very frequent cuſtom with thoſe who have reſided long in Africa, to wear only a ſhirt and trowſers, and in this dreſs to expoſe themſelves at night

night when the land breeze blows; or at other times to ſit in a current of air: but, however agreeable the preſent gratification may be, it is always followed by a feveriſh dry ſkin, owing to a ſtoppage of perſpiration, and very often proves a cauſe of violent diſeaſes; ſo that it is a practice by no means to be imitated by new ſettlers.

Exerciſe, when moderate, that is, when not carried ſo far as to produce fatigue, is proper; care being taken to avoid the hotteſt part of the day*: when it produces fatigue, the health is always thereby much endangered. It may be remarked, that white people are capable of as great, perhaps greater exertions, for a ſhort time, than the natives; but when thoſe exertions are to be long continued, Europeans are by no means able to contend with them. Shooting parties in the woods, &c. have a bad effect on the health of new comers, and ought to be avoided: indeed, for ſome time after their arrival, they ſhould be extremely careful not to expoſe themſelves in any manner. When Europeans undertake journies in this country, they ought to drink rather ſparingly. Too much fluid taken into the ſtomach cauſes oppreſſion, loſs of appetite, ſickneſs and faintneſs. It will be much better to deceive the thirſt by chewing ſome hard ſubſtance, and, on coming to pools of water, to be content with waſhing the mouth frequently, and dipping the hands and face into the water. Violent exertions are one cauſe of the great mortality among white ſailors in Africa: to ſupport the labour which they ſometimes are expoſed to in rowing boats, &c. they have recourſe to ſpirits; and, not unfrequently, hard labour is followed by a fit of

* The hotteſt part of the day is about two o'clock in the afternoon. The cooleſt time is about half an hour before ſun-riſe.

intoxication: in that ſtate they often paſs the night amid the chilling dews, under the open ſky, and are ſoon after affected with fevers, fluxes, rheumatic pains, &c.

One of the moſt important means of preſerving health in a hot climate, is by going early to reſt; a moderate indulgence in ſleep is there alſo more allowable than in Europe, but it ſhould always be confined to the night ſeaſon. Sleep during the day ſeldom refreſhes; it rather produces a languid and indolent ſtate of the body, and by increaſing the perſpiration, relaxes much more than it does at night. Early riſing, ſo much recommended in colder countries, does not ſeem to be attended with the ſame advantages between the tropics: the coolneſs of the morning is grateful; but the heavy dews which fall before ſun-riſe, and the thick fog which frequently lies upon the ground till the ſun has riſen, render the beginning of the day unwholeſome. At this time alſo, the ſtomach being empty, the body is more liable to be affected by fever, than at any other time of the day; more eſpecially in uncultivated and marſhy places.

Cold bathing is much uſed in the Weſt Indies, and is often recommended to thoſe who are recovering from a long illneſs. At Sierra Leone it has been but ſeldom employed, and ſcarcely ever with advantage. Many perſons have had returns of the ague ſoon after leaving the water, though they had not ſtaid in it any length of time. The coolneſs which is felt after bathing is very grateful, but it ſoon goes off, and renders the body more liable to be affected by the heat of the air than before. This is not the caſe with the *warm* bath, which when uſed after exerciſe in the hotteſt ſun-ſhine, not only relieves the preſent fatigue, but alſo leaves a moſt agreeable

coolneſs

coolneſs on the ſkin. It may therefore be uſed with great advantage two or three times a week.

The careleſs, and too often diſſolute habits of life of common ſailors, expoſe them to various diſeaſes; but after what has been already ſaid, the mode of treatment applicable to them may be comprized in a few words. They ſhould breakfaſt early, in the cool of the morning; and where tea * or coffee cannot be allowed, boiled rice, with butter or molaſſes may be uſed in its ſtead. Spirits ought never to be given to them without water; but if ſpruce beer could be ſubſtituted in place of theſe deſtructive liquors, it would be attended with the moſt happy effects. As far as is conſiſtent with the duty of the ſhip, the men ought to be guarded by an awning from the heat of the ſun. They ſhould be forbidden to ſleep upon the deck at nights; and laſtly, they ſhould be prevented from going without ſhirts and hats, with nothing but a handkerchief tied round their heads. In procuring wood and water for the ſhip's uſe, and in rowing boats, it will be much better to employ natives of the country than European ſeamen. Captains of ſhips ought frequently to inſpect their men; and when any of them appears to droop, he ſhould be obliged to leave off work. It not unfrequently happens, that a man has ſymptoms of fever hanging upon him for a day or two, or even longer, but does not chooſe to make any particular complaint, vainly ſuppoſing he ſhall be able to remove the

* As a proof of the advantage derived from an allowance of tea or coffee, it has been obſerved, that the uſe of either of them often induces ſailors to forego the drinking of ſtrong liquors, and their favourite but deſtructive grog. After hard labour of any kind, tea is the moſt cordial and refreſhing liquor that can be drank.

disagreeable sensations he feels, by work and exercise. In this way many valuable lives are lost, and those sudden deaths occur of which we so frequently hear; for by such attempts to resist the accession of the disease, many cases are rendered fatal, which by rest and timely care would have proved trifling. The present subject cannot be better closed than by quoting the observations of one of the most eminent * physicians of the present time, which tend to shew the dreadful effects of drinking spirits: these observations are peculiarly applicable to my purpose, for in no part of the world have the sacrifices to this baneful habit been so great as on the coast of Africa, where it may be with truth asserted, that "half the diseases which are said to be produced by warm weather," "are produced by the spirits which are swallowed to lessen its effects upon the system." "The effects of spirituous liquors upon the human body are sometimes slow in their appearance." "It would take up a volume to describe how much other disorders natural to the human body, are increased and complicated by them. Every species of inflammatory and putrid fever, is rendered more frequent and more dangerous by the use of spirituous liquors."

"In the use of spirits, there are certain progressive stages which deserve to be mentioned. Men begin generally by drinking them in a diluted state, at dinner only. They next drink them in the same state in the afternoon and evening. In the course of a few years they call for them in the forenoon, and soon afterwards before breakfast, increasing their strength from time to time, until they finally drink them in an undiluted state during every

* Dr. Rush of Philadelphia.—Compare Dr. Willan's "Reports on the Diseases in London." p. 132—6.

hour

hour of the night. I have known ſeveral perſons who have paſſed through all the above ſtages of intemperance, in whom the pulſe of life ſeemed to be ſupported for ſeveral months before their death only by drinking from one or two quarts of raw ſpirits every night." "When the body has been long expoſed to wet weather, and more eſpecially if cold be joined with it, a moderate quantity of ſpirits is not only proper, but highly uſeful to prevent the weakneſs which often follows and becomes a cauſe of fever." This is the only caſe that can occur, where ſpirituous liquors are innocent or neceſſary.

It was formerly an opinion, that the diſeaſes to which ſettlers in a new country were ſubject, entirely aroſe from a change of climate, and therefore could not be prevented. Experience dearly bought has however at length taught us better, and ſhewn that, in every country, there are ſome places more ſickly than others; and alſo that the diſtance is often very ſmall between an unhealthy and a healthy ſituation. It has been alſo ſufficiently proved, that there are certain cauſes which in every country, more eſpecially in warm climates, will produce fever. The moſt common, and alſo the moſt fatal of theſe cauſes, is the vapour ariſing from ſwamps and marſhes*, or ſpots of ground, partly covered with mud, and partly

* Though the moſt common cauſe of fever in hot climates be the air which blows over marſhes, yet when the fever is once introduced among a number of people, it is very apt to become infectious, and ſpread where the original cauſe does not reach: this is only to be avoided by keeping the ſick in cool, airy places, apart from others; by paying the ſtricteſt attention to cleanlineſs, and by putting the clothes of the patient into water as ſoon as he changes them, which ought to be done every day. All bad ſmells muſt be prevented as much as poſſible, by ſprinkling a little vinegar upon the floor frequently in the day.

with

with water. A ſtranger who goes into the fens of Lincolnſhire, or into any of the marſhy parts of England, will not long eſcape an attack of fever, though the inhabitants, from cuſtom, find no inconvenience. The hotter the ſeaſon of the year is, the ſooner and more ſeverely will his diſorder be felt: whereas had he gone there during a ſevere froſt, he would have eſcaped ſo long as the cold continued. Great degrees of heat are very ſeldom the cauſe of diſeaſe. The hotteſt part of the dry ſeaſon between the tropics, in dry ſituations, is far from being unhealthy: it is only when moiſture is added to heat, that feveriſh diſorders are produced: and hence it is, that the rainy ſeaſon proves ſo dangerous. In low wet ſituations, the ſickneſs is then greatly increaſed, the ſlime and mud which is left on the banks of rivers infecting the air with noxious exhalations which few Europeans can bear. Large lakes, though their vicinity is by no means a ſituation to be choſen, have not ſuch bad effects while full; but as ſoon as the water becomes ſo low that the bottom is ſeen dry in various parts, diſeaſes are aſtoniſhingly multiplied. The ſmell ariſing from mud is found very offenſive on going up ſmall rivers or creeks lined with thick mangroves; and when this is perceived it may be with certainty concluded that the place is unhealthy.

Perſons living to windward of a marſh or ſwamp, though at no great diſtance from it, may enjoy a good ſtate of health; but if they are to leeward of it, even at a conſiderable diſtance, their ſituation will certainly prove unhealthy. It is not eaſy to ſay at what diſtance from a ſwamp the wind which blows over it loſes its hurtful qualities; we have however reaſon to ſuppoſe the diſtance

is

is at leaſt a mile. Perſons living to leeward of a marſh, and at no great diſtance, have often had their health preſerved by trees growing between them and the marſh: in ſuch ſituations therefore trees ought not to be cut down: but it is ſurely moſt prudent to avoid ſuch places altogether. The precautions taken by thoſe who live on ſhore with reſpect to ſituation, ought alſo to be obſerved in ſtationing ſhips. It has often happened in fleets lying at anchor off a ſwampy ſhore, that the ſhips neareſt to it have proved very unhealthy; ſome of their people dying every day, while the crews of veſſels diſtant from it a mile or more remained in perfect health. When ſhips are obliged to continue long in ſuch unfavorable ſituations, every poſſible care ſhould be taken to counteract their bad effects: it has been found very uſeful where the veſſels ride head to wind, to have a ſail ſtretched acroſs the fore part of the ſhip, the cook's hearth being placed behind it, ſo that the ſmoke may go over the veſſel. When the ſide of the ſhip is expoſed to the wind from the ſhore, the ports on that ſide ſhould be kept conſtantly cloſe. In ſuch ſituations alſo it will be found of much uſe to ſmoke the ſhip frequently between decks: this may be done by burning tobacco, junk, gunpowder, &c. in a common iron pot, or by carrying a fire into different parts of the ſhip: the dampneſs of the air is thus moſt effectually deſtroyed; and to the moiſture of the air, we muſt refer a great part of its hurtful effects. The ill conſequences of an unhealthy ſituation are more ſeverely felt by thoſe who paſs the night in it: by returning to ſleep on board their ſhips, the men often eſcape the danger; but if they remain all night on ſhore, however well accommodated with beds, they are very liable to be

affected

affected with ſickneſs. The crews of boats employed in wooding or watering, who ſtay all night on ſhore, or remain there ſome time after ſun-ſet, are very frequently cut off by fevers; and this has happened two or three times to the ſame ſhip during a ſhort ſtay at one place. The bad effects of this expoſure in an unhealthy country do not always immediately appear: they are ſometimes not felt in leſs than a week or ten days after leaving the place and getting out to ſea. It has alſo been found that a hot, damp air, independently of ſituation, may produce ſickneſs on board of ſhips, though every poſſible care be taken to keep them clean and comfortable. When therefore a veſſel is waſhed between decks, no perſon ſhould ſtay below until the whole be thoroughly dried by having the ports open, by placing fires in different parts, making a ſmoke, &c. The latter ſhould alſo be practiſed at leaſt twice a week in ſtormy weather when the ports cannot be opened. In damp weather when on ſhore, when ſugar and ſalt turn moiſt, when paper becomes ſo damp as ſcarcely to bear writing, when iron ruſts, and when leather becomes mouldy, fires ought to be made at different times in the day, and the houſes well ſmoked, to dry the air, but more eſpecially bed rooms. Thoſe who live in houſes, the walls of which are plaiſtered with mud, frequently during the continuance of hot weather, wet the walls and floor to cool the air; this is a very hurtful practice, as it renders the air moiſt and brings it nearly into the ſtate it is in during the rainy ſeaſon; thus producing ſickneſs, particularly a return of the ague in thoſe who have had it before. When veſſels lie in theſe unhealthy ſtations, it will be found of great uſe to wear warmer clothing, eſpecially woollen or flannel, and in

caſe

caſe of getting wet, it is ſcarcely neceſſary to obſerve that the clothes ſhould be immediately changed. Perſons returning home with wet or cold feet may ſometimes prevent the diſorders thence occaſioned by waſhing their feet with ſpirit.

The ſigns of an unhealthy country are great ſwarms of flies, muſquitoes, &c. thick fogs lying upon the ground for ſome time after ſun riſe, heavy dews, and very cold nights ſucceeding very hot days, thick mangroves lining the banks of rivers on a flat ſhore not much higher than the ſurface of the water.

Healthy ſituations are thoſe where the ſoil is dry and elevated, as upon the ſides or ſummit of a hill, at a diſtance from marſhes and ſtagnating waters: although the banks of a running river are much more wholeſome than ſtanding water, yet ſuch a ſituation ought not to be choſen, being not always a healthy one. Some ſituations are rendered much hotter than others in the neighbourhood by a ſandy or rocky ſoil reflecting the heat; or from being low and ſurrounded by high hills. In general, places open to the ſea, bordered by a ſandy or gravelly beach, free from ſlime and ooze, are preferable to all others: beſides being more healthy, they are alſo cooler, and not expoſed to ſuch ſudden changes from heat to cold as places farther inland. A change of ſituation has often been found of great uſe, when patients have been recovering from a fit of ſickneſs, or have had frequent attack of it in the ſame place. It is more particularly uſeful where agues, through miſmanagement have become inveterate, returning as it were by habit. In ſuch circumſtances a change of place frequently brings immediate

relief,

relief, which however is not always of long continuance: when therefore the patient feels himſelf relapſing into his former ſtate, he muſt remove again to another ſituation, or even return to the place he laſt quitted; and by doing ſo two or three times he will in general recover his health. Sometimes the removal for a ſhort time even into a leſs healthy place, has been found of ſervice in intermitting complaints; care being taken that the ſituation be tolerably dry, and not in the neighbourhood of ſwamps. A great part of the benefit ariſing from ſuch changes, may perhaps depend upon the relaxation they afford to the mind from the cares and anxieties of buſineſs.

Violent guſts of paſſion, peeviſhneſs, and fretfulneſs, lay the foundation for a variety of diſorders. A cheerful, eaſy temper is found to contribute much toward the preſervation of health. Too great care and anxiety of mind, even when employed on the preſervation of health, is the moſt certain means of loſing it. Anxiety and apprehenſion render the body more liable to be affected by infectious diſeaſes; and in ſickneſs, too frequently cauſe the complaint to terminate fatally. A ſea voyage has been much commended as a means of reſtoring health; and when the veſſel immediately leaves the coaſt it will undoubtedly be found ſo; but veſſels trading upon the coaſt are not ſo ſuitable for the purpoſe, being never at ſuch a diſtance from the land, as to afford any material change of ſituation: they are alſo liable to meet with frequent calms, in which caſe the heat becomes much more uncomfortable than it would be on ſhore.

Thoſe who will take the trouble of attending to the means

means above recommended for the preſervation of health, may probably find themſelves as little affected with ſickneſs in Africa, or the Weſt Indies, as if they had lived in the healthieſt parts of Europe. On the other hand, thoſe who will pay no attention to themſelves, are for the moſt part ſuch as could not long expect to enjoy good health in any climate.

Before an account is given of the diſeaſes to which Europeans are liable in hot countries, it may not be amiſs to notice ſome complaints frequently occurring on

SHIP-BOARD.

Sea Sickness, though in general only a temporary inconvenience affecting thoſe unaccuſtomed to the ſea, is ſometimes ſo ſevere and diſtreſſing as to become a ſerious diſeaſe. If it cannot inſtantly be removed, it may at leaſt with care be much moderated. At firſt the ſickneſs may be encouraged by taking a few cups of tea, or warm water, which will cleanſe the ſtomach and render the retching leſs ſevere. In a coſtive ſtate, it will be proper to take two or three of the purging pills. When the bowels are opened, if the ſtomach has been much weakened, and continues ſtill irritable, five or ten drops of tincture of opium may be taken in a little warm water, and if the ſickneſs does not abate in a couple of hours, it may be repeated; or, a tea ſpoonful of brandy added to a table ſpoonful of warm water may be taken inſtead of the former. When the ſtomach appears ſomewhat ſettled, a little food of a light and nouriſhing quality ought to be uſed, ſuch as Sago, Tapioca, Saloop, or Indian Arrow Root, to which may be added a little

Sherry

Sherry wine or brandy: only a few ſpoonfuls ſhould be taken at a time, and repeated at the interval of an hour or two. Portable ſoup is alſo a convenient form of exhibiting nouriſhment, and will be found highly uſeful. The patient ought to go upon deck, and remain as much in the centre of the ſhip as poſſible. Should the ſickneſs ſtill continue, the following plan may be purſued: a teaſpoonful of magneſia muſt be mixed very gradually in a cup of water; to the ſame quantity of water in another tea cup, muſt be added 20 or 30 drops of acid of vitriol, ſweetened at pleaſure: the magneſia muſt be ſwallowed firſt, and the acid immediately afterwards. This proves gently purgative, and may be repeated every two or three hours. When the bowels are ſufficiently open, the ſame good effects, unattended with purging, may be procured by diſſolving a ſcruple or half a dram of ſalt of tartar in a cup of water, and ſwallowing a table ſpoonful of lime or lemon juice immediately after it; or a proportionate quantity of concrete acid of lemon may be uſed in its ſtead. Perſons of weak conſtitutions, who are about to undertake a long voyage, particularly if in company with women or children, ſhould be careful to provide ſtores independent of the ſhip's proviſions. The ſhip-biſcuit is not always good, and is apt to diſagree with delicate ſtomachs. A ſuperior kind of biſcuit, and more palatable than the common ſort, may be made by cutting loaves of bread into ſlices, and putting them into an oven until criſp: they will keep for any length of time. Milk may be preſerved a conſiderable time by boiling it, and adding to it a quantity of ſugar. As a ſubſtitute for milk in tea, the yolk of an egg may be beat up with a little hot water. Eggs may be preſerved by covering

covering the ſhell with greaſe, or what is better, varniſh, or quick drying paint, &c. Fowls are generally provided by paſſengers, but unleſs particular care be taken, they ſoon fall ſick and die. They ought to be regularly fed, and their meat ſhould not ſtand till it be ſour: they ſhould alſo have abundance of water, but the moſt important part of the care conſiſts in giving them a portion of *animal food* with their meat, as a ſubſtitute for the worms, &c. which they pick up a ſhore. When therefore a fowl is killed the entrails ought not to be thrown away, but ſhould be minced ſmall and given to the others, who will be very eager to obtain them.

Scurvy is a diſeaſe which rarely fails to ſhew itſelf in long voyages, where proper care is not paid to the health and convenience of the crew. While this diſeaſe was little underſtood, its ravages were dreadful, as we ſee in the accounts of the earlieſt voyages to the Eaſt-Indies. Even ſo late as Commodore Anſon's voyage we find this diſeaſe producing the moſt incredible havoc. It is to the late ingenious Capt. Cook that we are indebted for the moſt ſatisfactory proof of the poſſibility of preſerving a ſhip's company from the attacks of this dreadful diſeaſe. The ſcurvy is univerſally occaſioned by living long upon a diet of putrid or ſalted meats, with little or no vegetable food, and a ſcanty allowance of, perhaps, bad water. Theſe cauſes lay the foundation for ſcurvy, which however frequently lurks a conſiderable time in the conſtitution before it ſhews itſelf. Other circumſtances however may have a great effect in haſtening its appearance, the chief of which are, 1ſt. Want of cleanlineſs, and ſleeping in foul, damp, and ill aired places. 2d. Fatigue; hence the ſcurvy often appears ſuddenly

ſuddenly after long continued ſtormy weather, or after a violent gale of wind, in which the ſailors have been expoſed to exceſſive labour at the pumps, and other neceſſary exertions. 3d. Indolence, with its uſual attendants, dejection of ſpirits and deſpondency; hence it is obſerved that the worſt ſailors on board are always thoſe who are firſt attacked with ſcurvy. This diſeaſe is not always attended with an uniform train of ſymptoms, but may be diſcovered by ſome of the following. The patient appears gloomy and diſcontented, averſe to uſe the leaſt exerciſe, or to join in any amuſement. He feels drowſy, and is fatigued by uſing the ſlighteſt exertion, which generally produces a troubleſome ſhortneſs of breath and cough. The gums ſwell, become ſpongy, and bleed from the ſlighteſt touch. The breath becomes extremely fœtid, and the teeth looſen, and frequently drop out. Sometimes the firſt appearance of the diſeaſe conſiſts in an unuſual heavineſs or numbneſs of the feet, with ſtiffneſs and inability of bending the knee joints. In ſome caſes the muſcles of the legs or arms are hard, ſtiff and contracted; and the legs frequently ſwell. The complexion becomes pale, ſallow, and bloated. The patient has a melancholy dejected look: his noſe frequently bleeds, and blood is poured out from various parts of the body. Red, yellowiſh, or purple coloured ſpots, of various ſizes, appear upon the legs, and various parts of the body; ulcers break out upon the legs; and wounds which had been healed many years frequently open again. The ſlighteſt ſcratch at this time is apt to become a foul and ſpreading ulcer, the ſurface of which is covered with a looſe ſpongy ſubſtance, called by the ſailors bullock's liver, which it ſomewhat reſembles. Theſe ſymptoms, if not checked, become rapidly worſe; the weakneſs daily increaſes;

increaſes; the patient faints from the ſlighteſt motion, and is often ſuddenly and unexpectedly carried off. As the ſcurvy is ſcarcely to be cured at ſea, while the cauſes producing it continue to be applied, it points out to maſters of ſhips the neceſſity of an early and ſtrict attention to the means of preventing its appearance. The chief of theſe are cleanlineſs, proper exerciſe, and good nouriſhment. Every inducement ſhould be held out to the ſailors to keep themſelves clean; and they ſhould be obliged to ſhift themſelves at proper and ſtated times. In warm weather, bathing ſhould be encouraged, and for the convenience of thoſe who cannot ſwim, as well as to prevent accidents from ſharks, &c. a ſail ought to be hung overboard. In dry weather, their hammocks ſhould be daily brought upon deck and opened, ſo that every part of the bed clothes may be expoſed to the air. As often as the weather will permit, the ſide ports ought to be opened, and every means uſed to ventilate the ſhip. The half-deck, and other parts where the erew ſleep, ought to be frequently and thoroughly cleanſed: in doing this however, the deck ought to be rather ſcraped than waſhed. When it is neceſſary to uſe water or vinegar, &c. to waſh theſe places, the men ought not to be allowed to return into them until they be perfectly dried by large fires made in iron pots, and carried to different parts of the ſhip. In new ſhips this ſhould be more ſtrictly attended to, as the dampneſs of their timbers renders them more ſickly than older and well-ſeaſoned ſhips. After rainy and ſtormy weather it is more eſpecially requiſite to dry the ſhip between decks; and alſo to oblige the ſailors to dry their clothes. When the weather turns ſuddenly cold, as in the high latitude of the

the Cape of Good Hope, &c. the ſailors ſhould always put on additional clothing. As nothing is more conducive to health than moderate exerciſe, which beſides invigorating the body, ſerves alſo to employ the mind, and to prevent it brooding upon unpleaſant ſubjects, when the neceſſary duty of the ſhip, the repairs of rigging, &c. are not ſufficient to employ the crew, they ſhould be encouraged to dance, cudgel, or uſe any other ſportive recreation. The regulations reſpecting diet are not ſo eaſily put in practice: in long voyages ſalted meat bebomes more or leſs tainted with putrefaction, therefore the quantity of animal food ought to be diminiſhed, and a larger proportion of vegetable aliment uſed in its ſtead. A good ſtock of tea, coffee, ſoft ſugar, and treacle ought to be laid in, which the advantages mentioned page 11, (note), has the further good effect of diminiſhing the quantity of animal food for diet. Now bread, where it can be afforded, is an important article, and may without much trouble be daily baked on board of ſhips. The grounds of porter anſwer pretty well as a ferment to raiſe the dough, but a quantity of yeaſt, which is greatly preferable, may be preſerved with little trouble for two or three years, if kept in cloſely corked bottles. For this purpoſe the yeaſt muſt be thinly ſpread upon a board, and when dry, ſcraped off and powdered. Preſerved fruits of all kinds will be found a highly uſeful, and grateful accommodation to ſcorbutic patients, who have an inſatiable deſire for almoſt all vegetables, but particularly thoſe of an acid nature. Green gooſberries may be preſerved eaſily for a year or more, by putting them into bottles, and afterwards covering them with water made pretty ſour with acid of vitriol. A quantity of the juice

of

of lemons or limes, may be preſerved for any length of time, by adding to the expreſſed juice about one-third of the quantity of ſpirit. A ſtill more convenient mode of carrying the acid of lemons in ſmall bulk, is now offered to the public by Mr. Coxwell, of Temple-Bar, London, in what he calls the concrete acid of lemons. Two ounces of theſe cryſtals added to a quart of water, render it equal in ſtrength and medicinal virtue, to the ſame quantity of freſh lemon juice. One, two, or three table ſpoonfuls of the mixture, according to the exigency of the ſymptoms, may be given to the patient, and repeated two or three times a day. Spruce beer has been already recommended, and will be found particularly uſeful in preventing this complaint. Of equal importance with wholeſome and nouriſhing food, is an abundant ſupply of pure water. A freſh ſtock of water ought to be laid in as often as circumſtances will allow, previous care having been taken to purify the caſks. Veſſels going from a northern climate to a ſouthern one, ought to have a good ſtock of onions, garlick, and flour of muſtard; and upon their return, a quantity of the capſicum, or Cayenne pepper, when it can be procured, will be found equally uſeful. Medicines are not of much ſervice in this complaint: a teaſpoonful of Peruvian bark, together with fifteen or twenty drops of acid of vitriol in water, may be tried two or three times a day, with the greateſt probability of ſucceſs. When ulcers break out, they require the application of a carrot poultice, of yeaſt, or of meal, and ſtale beer; but they ſeldom heal entirely till the patient approach the land, and can procure what he moſt ardently deſires, a ſupply of fruits and freſh vegetables.

As the health of ſeamen ſo much depends upon the water on board, the quality of it ſhould be made an object

of particular attention. The following mode of preserving water perfectly sweet during long voyages, was proposed by General Bentham; and the experiment has been tried on board two sloops of war, the Arrow and the Dart, and appears to have completely answered the purpose intended. "Instead of the ordinary stowage in casks, sixteen tanks or cases, adapted to the shape of the hold, were placed in each vessel, and filled with about forty tons of water, by means of which the water occupied much less room in the ships than it would have done if casks had been made use of. The tanks were made of wood, accurately lined with sheets of tinned copper, all the junctures of which were secured by solder, so that the water was no where in contact with any thing but the surface of tin. By way of comparison, about thirty tons of water were stowed on board each vessel, in casks as usual. The water in all the tanks on board one ship, and that in thirteen of the tanks on board the other, was uniformly found to continue as pure as when it was first taken from the spring: that which was contained in the other three tanks, was more or less tainted, as that in the casks was. After the water had remained on board a sufficient length of time, it was used out, and the tanks replenished from time to time; but in some of the tanks, the water was allowed to continue three years and a half; twenty-five gallons of which, being sent to the Society for the Encouragement of Arts, &c. was found to be wholly unaltered."

Where casks are used, it has been recommended to put a couple of handfuls of quick lime into each cask, to rinse it well, and after it has stood five or six days to pour the water off, and fill the cask afresh. By this means the lime will incrust the inside of the vessel; and it has been found

found by experience, to preſerve the water pure for ſix months. Old, ſeaſoned water caſks, eſpecially thoſe of oak, preſerve the water much better than new ones. It has likewiſe been propoſed, to add to each caſk a handful of powdered charcoal; but a better effect will perhaps be produced by charring the inſide of the ſtaves before they be put together. The only method of rendering again fit for uſe the water after it has become putrid, is to expoſe it freely to the air by a machine invented for that purpoſe, and uſed in the navy; or in its ſtead may be ſubſtituted a cullender, or perforated veſſel, through which the water muſt be repeatedly paſſed, and allowed to fall from a height like a ſhower of rain.

Thoſe who wiſh to obtain freſh water at ſea, ſhould underſtand that the ſteam of ſalt water is as pure and free from ſalt, as that which ariſes from the pureſt ſpring. The only difficulty therefore is, to procure ſteam in ſufficient quantity, and with that view we muſt have recourſe to diſtillation. Various methods have been propoſed, but the eaſieſt and beſt is that employed by the late Dr. Irving, and for which he received a reward from parliament. For this purpoſe, the ſhip's kettle, or boiler, may be found ſufficient, the lid or cover of which ſhould be made tight by wet cloths or ſwabs. To the upper part of the lid muſt be fixed a tube ſlanting a little downwards, compoſed of a ſheet of tinned iron or copper; or when theſe cannot be procured, a gun barrel, of a large bore, may be ſubſtituted. When the boiler is nearly filled with ſalt water for diſtillation, as ſoon as the ſteam ariſes, the tube muſt be conſtantly wet with a mop or ſwab dipped in cold water to condenſe the vapour, which will then be found to trickle down in drops into the veſſel placed below to receive it. The diſtillation may be continued while the

proviſions are cooking, which will ſave much fuel; but it ought not to be continued longer than till the water in the boiler be reduced to three-fourths of the original quantity: it muſt then be renewed.

The ſituation of men placed in the midſt of an immenſe ocean, in a crazy ſhattered veſſel, nearly full of water, and threatening every inſtant to ſink, is truly deplorable; but the providential eſcapes of Capt. Inglefield from the Centaur, and Capt. Bligh from the Bounty, are ſuch ſtriking inſtances of what may be effected by reſolution and exertion, that even in the moſt deſperate circumſtances, men ought not to loſe their courage, nor give up life without a ſtruggle. Whilſt the boats remain unhurt, the inſtances above quoted, to which many more might be added, prove that the diſtreſſed crew may ſurvive their ſinking veſſel, and ſafely reach ſome diſtant ſhore. Placed in their only remaining hope, a ſlender ſkiff, either unſupplied, or at moſt having a ſcanty ſtock of proviſions, and little or no water, it may afford ſome conſolation, ſome encouragement for perſeverance to know, that men have ſurvived three weeks without ſupport, and have happily ſucceeded in gaining the ſhore. In ſuch caſes it has always been found, that the ſenſation of hunger greatly abates or entirely goes off in four or five days, and is ſucceeded by a violent inſupportable thirſt. The wonderful relief which ſuch ſufferers have experienced from being drenched to the ſkin in a ſhower of rain, has induced others to imitate this, by wetting their clothes in ſalt water; for it is univerſally known, that the ſkin can abſorb, or ſuck in, ſubſtances applied to its ſurface; and hence immerſion in water will remove thirſt. It will therefore be found highly uſeful for the crew to dip their clothes twice a day in the ſea, and put them on wet;

wet; this will not only relieve the thirſt, but as deſcribed by thoſe who have experienced its benefit, will add vigour to the body, without any riſk of catching cold. Chewing any hard ſubſtance, as wood, &c. by promoting a diſcharge of ſaliva will tend to diminiſh the ſenſation of thirſt. To abate the uneaſy cravings of hunger, the example of ſome tribes of American Indians may be imitated, who when upon hunting expeditions, and obliged to paſs many days without food, compreſs the ſtomach by means of flat boards laced round them, which they draw tighter every day.

When men are taken up at ſea by a veſſel, after having undergone the hardſhips abovementioned, the greateſt care is requiſite in affording relief to the unhappy ſufferers. If they have been long expoſed to cold, and the limbs be benumbed, the application of external heat muſt be carefully avoided: in cold climates, and when froſt-bitten, the application of ſnow or iced-water is neceſſary; but in a warm climate, moderate friction with the hands may ſuffice. Spirits, even in a diluted ſtate, muſt be ſhunned as poiſon. At firſt the deſire for food is loſt, but the appetite ſoon becomes ſo voracious, that were it indulged, death would inevitably enſue. In proportion to the weakneſs of the body and the time they have been without food, muſt be the care employed in gradually ſupplying them with nouriſhment. The leaſt nouriſhing foods muſt firſt be given in ſmall quantity, and cold, ſuch as water gruel, weak broths, &c. and repeated at intervals of two, three, or four hours. As ſoon as the ſtrength returns the appetite may be a little more indulged, but extreme care is requiſite for many days, and even weeks, leſt *one full meal* ſhould endanger life.

I ſhall

I ſhall next deſcribe thoſe diſorders which moſt frequently occurred at Sierra Leone, and which occur in all ſimilar climates.

Fever is not only the moſt frequent, but the moſt important diſeaſe to which Europeans thus ſituated are liable; its courſe is more rapid, and without great care it ſooner terminates fatally than the acute diſeaſes of a colder climate, but when properly treated it may be rendered even leſs dangerous than a fever in Europe.

Fever may be divided into two kinds. 1. Remittent fever, or what is in general denominated ſimply, the Fever. 2. Intermittent fever, or Ague. Theſe two diſeaſes have a cloſe affinity with each other, ſo that by improper treatment, the ague is eaſily changed into fever, and proves fatal: on the contrary, the fever ſometimes terminates in an ague, and thus becomes leſs dangerous. Remittents and Intermittents may be diſtinguiſhed from each other by the following circumſtances: in the former, the ſymptoms have at times only a ſhort and trifling alleviation, not always perceptible by the patient; in the latter, as ſoon as one fit is concluded, little uneaſineſs is felt for ſeveral hours, and the patient remains apparently well till the approach of another fit.

It ſeems proper to begin with the deſcription of an Ague, which is more regular in its appearances than the remittent fever.

An ague is divided into two parts; 1. The paroxyſm or fit; 2. The intermiſſion, or temporary ceſſation of all complaints. Again, the paroxyſm may be divided into three parts or ſtages; 1. The cold fit. 2. The hot fit. 3. The ſweating fit, which follow each other in regular order. When the ſweating fit is over, the patient remains

mains free from complaint until the next cold fit begin; and this interval is called the intermiſſion.

The manner in which an ague commences is various: ſometimes the cold fit appears ſuddenly, when the patient thinks himſelf in perfect health; at other times a languor and wearineſs, with yawning, and ſtretching of the limbs, previouſly take place for a day or two. Theſe ſymptoms are ſucceeded by a ſlight coldneſs at the ends of the fingers, which become ſhrunk and pale; a ſlight degree of coldneſs is alſo felt in the back and loins, and gradually ſpreads over all the body. The cold fit is often ſo violent as to make the patient's teeth chatter, and to ſhake his whole body. There is always ſome degree of thirſt, and a clammineſs in the mouth. A fixed pain is often felt in the head, chiefly over the eyes, but it is ſeldom ſevere during the cold fit. Sometimes the cold fit is ſo ſlight as ſcarcely to be perceptible, and continues only a few minutes; at other times, it may continue for an hour or longer. In the hot fit, which ſucceeds, ſlight fluſhings of heat are felt in different parts of the body, the face becomes red, the eyes bright and unable to bear the light; theſe ſymptoms are often perceived for ſome time by the by-ſtanders before the patient will allow that the cold fit is over. Preſently, however, the ſkin feels dry and burning, the thirſt is increaſed, the eyes are more prominent, and ſometimes appear as if blood-ſhot. The head-ache, which generally begins in the cold fit, becomes more ſevere, and is often attended with a troubleſome beating noiſe in the head. The patient is much agitated, and reſtleſs, from a ſenſation of undeſcribable anxiety: he is alſo frequently affected with ſickneſs at ſtomach, and violent vomiting. When theſe ſymptoms

have continued a few hours, generally about ſix or eight, they begin to abate; the harſh, dry and prickly ſtate of the ſkin becomes leſs perceptible; a gentle moiſture breaks out, firſt about the face, neck, and breaſt, and ſpreads from thence over the whole body. As the ſweat continues to flow, all the diſtreſſing ſymptoms gradually diſappear, and the patient at length ſeems reſtored to perfect health.

Although the uſual progreſs of an ague be as above ſtated, yet variations from it occur in ſeveral caſes. There is ſometimes no regular cold fit: but the diſeaſe comes on with a pain more or leſs ſevere, affecting the whole head, or perhaps only one ſide of it, or the forehead over the eyes: there is ſometimes only pain of the back or loins. The pain, whether in the head or back, continues a few hours, and is at length carried off by a ſweat breaking out firſt on the affected part, and thence diffuſed over the whole body, without the intervention of a regular hot fit.

An intermitting fever, however modified, may, in general, be known by the return of its paroxyſms or fits, at ſtated periods; and by the intervals in which the patient remains free from complaint.

Agues are of three kinds: 1. Quotidian (or every-day ague) 2. Tertian (or third-day ague) and 3. Quartan (or fourth-day ague). In the quotidian there is a fit once in twenty-four hours. In the tertian there is one every forty-eight hours; and in the quartan there is a fit once in ſeventy-two hours. The periods of an ague are, for the moſt part, ſo regular, that the fit commences on the days of its return, preciſely at the ſame time: there is, however, occaſionally ſome variation in this reſpect: the fit

may

may come on one or more hours before the usual time: it is then termed an anticipating fit; or it may come on one or more hours later at each return: this is called a postponing fit, which denotes a less violent disease. The whole duration of an ague fit seldom exceeds twelve or fourteen hours; sometimes it is only six or eight hours. Agues do not often prove fatal; yet, when improperly treated, as by hot spirituous medicines, given with a view of preventing the return of the cold fit, they are sometimes changed into fevers of a very dangerous kind. If they be neglected at first, or suffered to continue long without medical interference, the fits return, as it were, habitually; so that when they are afterwards checked by proper remedies, and the disease seems to be at an end, the least fatigue or exposure to cold is sufficient to produce a relapse. Thus the patient is harrassed by frequent returns of the paroxysms, for a great length of time; he becomes sallow and emaciated, his body and lower extremities are affected with dropsical swellings; and his existence is rendered truly miserable.

Much mischief has arisen in consequence of an opinion which is too generally entertained, that whenever a cold fit takes place, no danger is to be apprehended; and the patient's friends are confirmed in this opinion, as they observe that after lying down a few hours while the fit is upon him, he has frequently a keen appetite as soon as it is over, and can return to his work as usual. The fits likewise, after several returns, seem to become milder; and sometimes wholly cease for a few days, a week, or a month, and then return only for a short time: this deceives the patient, who thinks the disease is gradually going off, while, on the contrary, it grows more invete-

rate, and is undermining his conſtitution. It cannot be too often repeated, that we ought never to neglect, nor think ſlightly of an ague: by not attending to this maxim many Europeans on the coaſt of Africa have been irretrievably injured; for experience ſufficiently proves, that the conſequences of a neglected or miſmanaged ague are, in tropical climates, more fatal, than even the effects of a continued fever.

Cure.---Notwithſtanding what has been ſaid above, it may be with confidence aſſerted, that no diſeaſe is more eaſily curable than an ague, when the proper treatment is early applied. If a fit has actually commenced, it muſt be left to finiſh its ſtages: nothing can be done farther than to render the ſymptoms more tolerable to the patient. He ſhould go to bed and be well covered: if he is affected with ſickneſs, and retching, this may be gently promoted by drinking a little tea, or warm water. Should the tongue be very white, and furred, with a bad taſte in the mouth, and a ſenſation of weight and anxiety at the ſtomach, it will be of uſe to give a gentle emetic, which not only diſcharges the contents of the ſtomach, but likewiſe ſhortens the duration of the cold fit. When the ſtomach does not ſeem much affected, an emetic is unneceſſary. At the beginning of the hot fit the pain of the head is generally the moſt diſtreſſing ſymptom: it may be relieved by 2 grains of opium made into a pill, or by 30 drops of laudanum taken in a little water, to which a tea-ſpoonful of ſweet ſpirit of nitre may be added. This remedy often relieves the head-ache inſtantaneouſly, and produces a copious ſweat. Where the ſickneſs has not been conſiderable enough to render a vomit neceſſary, or where the ſtomach remains unſettled after the

the operation of the emetic, it is beſt to give only half the draught with laudanum at firſt, and the other half ſometime afterwards, by which means, if the firſt doſe be rejected, the ſecond will more certainly ſtay on the ſtomach. When the ſenſe of coldneſs is over, the patient may be kept as cool as he pleaſes: during the ſweating fit alſo, he ſhould be but lightly covered; he muſt, however, avoid expoſure to any currents of air.

The thirſt is generally very troubleſome during the hot fit, to abate which he may drink tea, toaſt and water, lime juice and water a little ſweetened; or he may take the juice of oranges, pines, the yellow plum, &c. But as the quantity of liquids taken often overloads the ſtomach without quenching thirſt, it is better for the patient to palliate this diſtreſſing ſenſation by ſucking at the mouth of a quart bottle filled with water, or any agreeable beverage, and covered with a double piece of thick cloth; a ſufficient quantity of fluid may be thus tranſmitted to preſerve a continual moiſture in the mouth and throat, without injuring the ſtomach.

For the ſweating fit no particular directions are requiſite, as the patient is then tolerably eaſy; as ſoon as it is over he muſt be rubbed dry, and put on dry clothes. The fit being thus brought to a concluſion, the patient immediately feels ſo well that he imagines it will never return; but experience would ſoon convince him of his error; another, perhaps a much ſeverer fit is preparing, which can only be prevented by a ſteady and plentiful uſe of the bark. An ounce of bark is the ſmalleſt quantity that will, with any certainty, produce this effect; a larger quantity, as an ounce and a half, ought therefore to be taken if the ſtomach can poſſibly bear it The beſt

method is to have the requiſite quantity mixed with water at one time; and to take a wine-glaſs full every hour, or every two hours, according to the patient's ability. It muſt be remembered, if the diſeaſe be a quotidian, which has ſhort intermiſſions, that leſs time is allowed for the remedy than in a tertian; it muſt therefore be taken quicker. If three table-ſpoonfuls of bark be mixed with the quantity of water which would fill eight or nine wine glaſſes, one glaſs full may be taken every hour without much difficulty.

It ſometimes happens that although the cold fit be prevented by the uſe of bark, a ſlight hot fit will nevertheleſs come on at the uſual period: when this happens the bark may ſtill be continued without any fear of increaſing the fever. The ſame quantity of it ought to be taken every day, until at leaſt two periods be compleated; after which there may be daily ſome diminution of it: for the more gradually this remedy is left off, the leſs danger there is of a relapſe; and even when the bark is finally diſcontinued, it will be of uſe to take a doſe of bitters two or three times a day for a week longer. Care ſhould alſo be taken to keep open the bowels, at leaſt once every day; for this purpoſe a calomel pill* may be taken; or if the bark prove too binding, 8 or 10 grains of rhubarb may be added to each doſe of it, till the requiſite effect be produced. If the bark ſhould purge, a draught with 30 drops of laudanum may be taken at once; or 5 drops of laudanum may be added to each doſe of the bark, till its purgative operation ceaſes.

Case of Ague.—T. W. has been a conſiderable time upon the coaſt. On Monday about noon, whilſt

* Containing 2 or 3 grains of calomel.

apparently

apparently in good health, he was ſeized with the cold fit of an ague, which continued ſevere for near an hour: in the ſucceeding hot fit, the head-ache became violent; and his eyes were much affected by the light. Two grains of opium taken at this time relieved the head-ache; but the ſkin remained hot and dry for about two hours; when, by degrees, a gentle moiſture broke out, which at length terminated in a profuſe ſweat, and removed all the complaints. About eight o'clock, the ſweating being over, he put on dry clothes, and felt eaſy and comfortable, though ſomewhat debilitated.

He is to begin in the morning to take a drachm of bark every two hours during the day.

Tuesday.—He had already taken ſix drachms of the bark, when he was ſuddenly and unexpectedly ſeized with a violent cold fit at nine o'clock in the morning, i. e. three hours before the time of the firſt attack. The cold fit was attended with frequent vomitings, and great pain in the forehead. The ſickneſs was relieved and the head-ache much abated by taking 2 grains of opium. The ſweat did not break out till about three o'clock in the afternoon, and was not finiſhed till after eight o'clock, when he felt much relieved but extremely weak. As the laſt had been an anticipating fit, he was ordered to begin the bark at midnight, and to continue it every hour till the expected return of the next fit, lying the whole time in bed.

Wednesday Noon.—He had taken an ounce and a half of bark this morning before nine o'clock, and has not felt the ſmalleſt ſymptom of the fit: is ſtill in bed. —To take half an ounce more bark to-day, and to get up

up towards evening. Alſo to begin early in the morning to take bark, remaining in bed as before.

THURSDAY NOON.—Has taken above an ounce of bark to-day, and felt no return of the fit.

The bark being continued for a few days longer, and then gradually left off, there was no return of the ague.

The circumſtances of an ague having been at large explained, the Fever of which I am next to treat, will be more eaſily underſtood. This is the moſt fatal diſeaſe affecting Europeans on the coaſt of Africa; though if taken early and properly treated, it is not more dangerous than the fevers of colder climates.

Fever is divided into the paroxyſm, or fit, and the remiſſion, or period in which the violence of the ſymptoms has ſome abatement. The paroxyſm is ſubdivided, like that of an ague, into the cold, the hot, and the ſweating fits; but theſe ſeldom follow each other with much regularity, unleſs it be immediately on the firſt attack of the diſeaſe. The cold fit is not very ſevere, and in many caſes does not appear after the firſt time: the ſweating fit is equally uncertain, neither does it always afford that relief which is experienced from it in an ague; on which account the period between the end of the ſweating fit and the commencement of the next paroxyſm is called, in fever, the time of *remiſſion*, not, as in agues, an *intermiſſion*.

The manner in which the fever comes on is different in different people; it frequently appears as a common cold, producing ſlighthead-ache, chillineſs, and wandering pains over the body; but is ſo ſlight that the patient ſcarcely thinks himſelf unwell. With theſe deceitful ſymptoms it continues three or four days, until the great weakneſs

weakneſs of the patient, or ſome ſudden change in the diſeaſe, raiſes an alarm. It is thus, probably, that many perſons are ſaid to be carried off by fevers within forty-eight hours: whereas, had the time been reckoned from the firſt ſenſation of illneſs, it would have been ſix or ſeven days, or more.

The patient ſometimes feels uneaſy for a day or two before any febrile ſymptoms take place: there is a heat and heavineſs of the eye-lids, ſo that he can ſcarcely keep them open; or a burning heat in the palms of the hands and ſoles of the feet; he feels the ſkin dry, rough and uncomfortable; complains of a loſs of appetite and bad taſte of the mouth; and has a ſenſation of anxiety, or univerſal oppreſſion, not eaſy to be deſcribed. The previous ſenſations, however, are ſo numerous and varied, that almoſt every perſon who has had the diſeaſe, is conſcious of its future attacks by a ſet of feelings peculiar to himſelf. There is ſometimes a dark ſallow complexion, with a heavy dull eye, and a want of activity, which continue for a day or two, and point out the approach of fever to a by-ſtander, though the patient makes no complaint himſelf.

The fever uſually commences with ſhiverings, not very ſevere, and ſometimes ſcarcely noticed by the patient. The ſhivering is ſucceeded by the ſymptoms which occur in the hot fit of an ague; but the reſtleſſneſs and anxiety are in fever generally greater: the pain of the head alſo is more diſtreſſing, and ſeems often as if produced by a ſharp inſtrument fixed over the eyes: at other times there is a ſenſe of tightneſs over the forehead, as if the head were bound round with a cord. There is a burning heat in the ſkin, though to the patient it feels rather cool, which

which is apt to miſlead; but if the hand at this time be applied over the forehead, the heat will be found very great. The patient toſſes about, and ſeeks eaſe in every part of the bed: ſometimes, however he lies upon his back, inwardly moaning, without making any ſpecific complaint. In this caſe, if the hand be applied over the ſtomach ſo as to preſs it gently, the uneaſineſs is in general increaſed. There is ſeldom much delirum, but the patient ſeems confuſed, and gives very quick anſwers to the queſtions put to him: if he fall into a ſleep it is for the moſt part uneaſy, and interrupted by frequent ſtartings.

When theſe ſymptoms have continued with more or leſs ſeverity for a few hours, a ſweat breaks out, firſt about the neck and breaſt, ſometimes, though ſeldom, ſpreading over the whole body: this ſweat is more likely to be diffuſed over the body after the firſt fit than after any of the ſucceeding ones. The relief which follows it after the firſt fit is ſometimes ſo great that the patient thinks himſelf well, though the head-ache does not go off ſo entirely as in the ague; and his ſtrength remains greatly depreſſed. This relief of the ſymptoms, or remiſſion, laſts only ſix or eight hours, when another fit comes on, generally a much more ſevere one. The ſecond paroxyſm being ſeldom preceded by a cold ſtage, ſeems to conſiſt only of a hot fit, more eſpecially as the ſweating ſtage, which ſhould follow it, does not appear with any regularity at the ſecond or third return of the paroxyſm. In ſhort, all the ſymptoms become more violent, and the remiſſion leſs perceptible every ſucceeding fit. The fever goes on in this manner until the patient's ſtrength is entirely exhauſted: a fatal termination ſeldom happens

happens before the fifth or ſixth day, but takes place generally about the eleventh or twelfth day, if the complaint has been neglected in the beginning.

Danger is to be apprehended 1ſt. When the head ſeems much affected, the patient lying on his back in a ſtupid ſtate as if aſleep, and being with difficulty rouſed.

2. When every thing he takes is rejected by vomiting.

3. When, apparently in a ſtupid ſtate, he raiſes his hand often to his ſtomach, or complains much when it is preſſed upon.

A frequent and diſtreſſing hiccup, involuntary diſcharges of urine, and ſtools: cold clammy ſweats, with coldneſs of the hands and feet, ſhew that death is faſt approaching.

We have reaſon to hope the diſeaſe will terminate favorably, when there is no particular reſtleſſneſs or anxiety; when the ſymptoms appear to abate, or at leaſt do not increaſe in violence; when the fever comes on at a later hour every day; and when the patient enjoys, from time to time, a calm and refreſhing ſleep.

This diſeaſe ſhould never be neglected at its commencement; for often when it appears at firſt very ſlight, it yet terminates fatally: on the contrary, when its attack is violent and alarming, it may afterwards become a mild diſeaſe, free from danger. No flattering hopes ſhould be excited by any ſudden alleviation of the ſymptoms, ſuch as that which often takes place after the firſt paroxyſm of the fever. Many perſons, through the want of experience, fall into a fatal error, being induced by what they conſider as a favorable turn of the diſeaſe, to decline the further uſe of medicine, and thus loſe the moſt critical period of the diſeaſe, which, if properly employed,

employed, would lead to a happy concluſion. A perſon who, for the firſt time, has had a fit of the fever as above deſcribed, and in conſequence of the ſweating feels ſo much relieved, as to ſuppoſe himſelf well; may by attending to the following ſymptoms be convinced that he will have a return of fever. 1. There ſtill remains a ſlight degree of pain in his forehead, or a pain fixed over one or both eyes. 2. The ſkin feels rather clammy, and hotter than uſual. 3. There is an aſtoniſhing degree of weakneſs; and, 4. The pulſe is quicker than it ought to be. It will be uſeful for every one to acquire ſome knowledge of the quickneſs and force of the pulſe, which may be done by comparing the pulſe of a ſick man with that of a man in health. The number of pulſations may be felt by applying the fingers on the inſide of the wriſt, and counting them by a ſtop watch, or with a quarter minute, or half minute ſand glaſs, ſuch as is uſed in heaving the log. The ſtandard pulſe of health is eſtimated at ſeventy-two beats in a minute; but as there are many variations from this amongſt individuals, it is of conſequence to aſcertain the uſual ſtate of the pulſe in perſons committed to our care. The morning is the beſt time for the experiment; eating, drinking, exerciſe, paſſions, &c. quicken the pulſe. In a fever the pulſe may be from ninety to one hundred and twenty, or to one hundred and forty. In general we may ſay, when the pulſe is increaſed, for a length of time, fifteen or twenty beats above the ſtandard, it is a feveriſh pulſe; when it abates fifteen or twenty beats, though it does come down to its uſual number in health, we may conclude there is a remiſſion; the pulſe however muſt not alone be attend to in fevers.

When

When a perſon is affected with the ſymptoms of fever already deſcribed, no time ſhould be loſt in beginning the cure. If he complains of ſickneſs at ſtomach, and a bad taſte in the mouth, his tongue being white and very clammy, a gentle vomit will be uſeful, conſiſting of a ſcruple of ipecacuanha, and one grain of tartar emetic. If there be a ſpontaneous vomiting, the emetic may be omitted; and it will be ſufficient to drink a few cupfuls of warm water. When the ſtomach is thus cleared, if any degree of nauſea remains, it may be checked by taking a very ſmall quantity (two or three tea-ſpoonfuls) of brandy, mixed with as much warm water, and keeping very quiet; or by 15 drops of laudanum, and 20 drops of ſpirit of nitre taken mixed with a ſmall quantity of water: if this ſhould not be retained on the ſtomach, a ſimilar draught may be taken again in half an hour: but if no ſickneſs occurs, it may be deferred for an hour. When an emetic is not thought neceſſary, or when there is no ſickneſs after it, the whole quantity of laudanum, i. e. 30 drops, may be taken at once, with a tea-ſpoonful of ſpirit of nitre and a little water. This medicine not only removes the nauſea which ſucceeds the operation of an emetic, but moreover allays the violence of the ſymptoms, eſpecially the head-ache, and reſtleſſneſs, and very ſoon produces a copious and ſalutary perſpiration. The emetic contributes to ſhorten the febrile paroxyſm, and for the moſt part acts gently on the bowels: ſhould it fail in this reſpect, a ſtool muſt be procured every twenty-four hours by other means.

The next and moſt important ſtep is to give the bark; and upon a proper and ſteady uſe of this remedy muſt depend

depend all our hopes of ſucceſs. For the ſake of clearneſs let us firſt review the arrangement of the whole medicinal plan, ſuppoſing a perſon to be affected with a paroxyſm of the fever about four o'clock in the afternoon. He immediately takes an emetic, the operation of which will continue about an hour and a half, or two hours: as his ſtomach is not then perhaps fully ſettled, he takes only half the opiate draught at ſix o'clock, and the remainder of it at half paſt ſix or ſeven o'clock. By theſe means the violence of the fit will be conſiderably diminiſhed, and the ſweating ſooner produced.

If the patient has veen very coſtive, and the emetic does not ſeem likely to promote any evacuation by the bowels, 6 or 8 grains of calomel made into a pill, or mixed with a little moſaſſes, may be taken between nine and ten o'clock. Some nouriſhment will alſo be about the ſame time proper, as a little ſago, wine and water, tea, or coffee. About twelve o'clock the patient may begin to feel himſelf ſtrong and comfortable, in which caſe he muſt immediately have recourſe to the bark, conſidering all that has hitherto been done merely as a preparation for it, and as of no avail in itſelf.

If the fever ſhould have continued ſome days before any medical aſſiſtance has been applied, it is of the utmoſt conſequence to adminiſter the bark immediately, not premiſing even an emetic, which does not then prove ſo effectual as on the firſt attack of the diſorder. When about to uſe the bark, we muſt recollect that in a large quantity only can material advantages be expected from it: in ſmall doſes it does not appear to have any effect. The ſtate of the ſtomach in individuals muſt direct the

preciſe quantity, ſome being able to retain a table ſpoonful at once, while others can ſcarcely bear a tea-ſpoonful. If only a ſmall quantity is taken at once, it becomes neceſſary to repeat the doſe more frequently. In general, two tea-ſpoonfuls of bark mixed in a wine glaſs of water, may be given every hour without inconvenience: if after having taken a few doſes, the patient ſhould be ſick, ſomewhat longer intervals muſt be allowed. An ounce and a half, or 2 ounces of the bark * taken within ſix or eight hours, or before the return of another paroxyſm, will be found to mitigate the violence of its ſymptoms; but is ſeldom effective enough wholly to prevent the fit, as in an ague. A return of the fever is marked by an increaſe of head-ach and thirſt, a dry ſkin, and great reſtleſſneſs. The bark, however, need not be diſcontinued when the above ſymptoms appear, unleſs they be attended with ſickneſs and vomiting, in which caſe it muſt be omitted for a few hours; or until the ſtomach is ſettled again by the uſe of laudanum in the manner formerly directed. If there be no ſickneſs and vomiting, the other ſymptoms will be relieved by 30 drops of laudanum taken in water, with a tea-ſpoonful of ſpirit of nitre: after which the bark may be continued every hour, or hour and a half. Should the ſkin ſtill remain dry, the ſpirit of nitre may be repeated without the opiate in the courſe of an hour or two; at the ſame time flannels wrung very dry out of water, made as hot as the hand can bear it, may be applied under the bed clothes to the legs from the knees to the ancles. There ought to be two ſets of theſe, ſo that when one ſet has been applied about a minute, it may be replaced by the other. After the

* As directed in page 36.

fomentation

fomentation has been continued for ten minutes, the legs ſhould be rubbed dry, and wrapped up in a piece of flannel. In caſe of pain or uneaſineſs at ſtomach, the ſame application made to the pit of the ſtomach for about ten minutes, affords almoſt certain relief: it alſo removes the head-ache, and very often diſpoſes the patient to ſleep. When the head-ache and other ſymptoms are not ſo ſevere as to require the laudanum immediately, an opiate may be given at bed time, and will in general procure a good night's reſt.

Although the violence of the paroxyſms has abated by the uſe of bark and other remedies, the patient muſt expect to remain for ſome days in a very weak and languid ſtate, with little appetite, with frequent hot fits during the day, and with more or leſs head-ache, eſpecially when he attempts to ſit up. Theſe ſymptoms can only be removed gradually, by perſiſting in the uſe of ſtrengthening medicines.

In ſome inſtances it happens that the head-ache is very violent, and continues diſtreſſing through the whole diſeaſe, being however aggravated during the time of the fit: when the laudanum and hot flannels fail in removing it, I have preſcribed with advantage 5 grains of camphor diſſolved in 30 or 40 drops of ſweet ſpirit of nitre, with as much ſpirit of wine, and diffuſed in a table ſpoonful of water: this may be repeated, if neceſſary within two hours: it operates in general by producing a copious ſweat without heating. A plantain leaf applied to the forehead, and renewed as often as it grows warm, often relieves ſlight head-aches by its agreeable coolneſs: the ſame good effects may be obtained by applying linen cloths dipped in cold vinegar and water to the

forehead,

forehead, and renewing them frequently. A large bliſter applied to the nape of the neck is likewiſe uſeful on ſome occaſions: but as the head-ache is only a ſymptom of the fever, and would ceaſe, the fever being removed, it is therefore proper along with the above remedies to continue the bark regularly.

The patient often falls into a ſtate of ſtupor, which might at firſt be miſtaken for a ſound ſleep, but which is diſtinguiſhable by the difficulty there is in rouſing him, and by his incoherent anſwers, when apparently awake. In ſuch a caſe, great danger is to be apprehended: the head muſt be immediately ſhaved, and a bliſter applied over it; if this does not ſeem to be felt, a large bliſter may be applied from the ancle half way up the inſide of the leg; and ſhould this produce little effect, another may be applied upon the oppoſite leg.

As patients cannot always bear the bark in the requiſite quantities, and often loathe it after ſome days' uſe, we ought to vary the manner of giving it. Some like to take it in wine, or brandy and water, and when this does not increaſe the head-ache it may be allowed; ſometimes it is retained beſt on the ſtomach when mixed with plain water, a drop of oil of mint, a teaſpoonful of ſpirit of lavender, or of Huxham's tincture of bark being added to each doſe. In ſome caſes, a pill with 2 grains of opium, or 30 drops of laudanum, within an hour after it has been given, will enable the ſtomach to bear the bark. The ſame end is ſometimes accompliſhed by mixing 5, 10, or 15 drops of laudanum, with the firſt doſe of bark, and repeating the ſame once or more, if the ſickneſs or vomiting returns; care being however taken not to exceed 30 or 40 drops in twelve or fourteen hours. The ſtomach

not

not unfrequently rejects the bark from being empty; the patient ſhould therefore take between each of the medicines a ſpoonful or two of ſago, or any other light food he chooſes. A coſtive ſtate of the bowels is likewiſe apt to make the bark diſagree, and ſeems to lie very heavy upon the ſtomach. This may be obviated by a calomel pill at night; by mixing 20 or 30 grains of rhubarb with the quantity of bark to be taken in the courſe of the day; by 3 or 4 aloetic pills, or a table-ſpoonful of caſtor-oil. The pills or rhubarb being of ſmall bulk, are leſs likely than ſalts, or purgative draughts, to produce ſickneſs, or interfere with the uſe of bark. When the bark happens to purge, 5 drops of laudanum may be added to each doſe of it; or 30 drops may be taken at bed-time. The patient's diet ſhould conſiſt of tea, coffee, ſago, tapioca, boiled rice, &c. Sometimes he feels a deſire for animal food, and may be gratified with a little boiled or roaſt fowl, mutton, or fiſh. London porter, lemonade, wine and water, or ſpruce beer, are the moſt proper drinks.

When the fever has ceaſed to return, and the patient can no longer bear the bark on his ſtomach, although given in ſmaller doſes and leſs frequently than at firſt, it will be of the greateſt advantage to take 20 grains of powder of columbo, or a cupful of bitters three times a day. When by theſe means the patient has recovered his former ſtrength, he may have reaſon to expect a continuance of good health; but if he leaves off his medicines ſuddenly, and while in a ſtate of great debility, he will be in conſtant danger of a relapſe. During the continuance of the fever, the patient ſhould uſe as little exerciſe as poſſible: if he be removed in the day-

time

time from one bed to another, it ſhould be done without any exertion on his ſide. Sitting up is frequently a cauſe of fainting, and ought not to be attempted.

The chamber of the ſick muſt be kept cool and ſtill. His hands, face, neck and breaſt ſhould be waſhed every day, and his linen changed. He muſt be kept as quiet as poſſible, and prevented from talking, and from hearing others talk. A free circulation of air is always uſeful, but ſtrong currents of it ſhould be avoided.

With a view to render what has been ſaid more eaſily underſtood, the two following caſes of perſons who had the fever at Sierra Leone are inſerted.

A. B. aged thirty, of a fair complexion, and lately arrived on the coaſt, on Monday about noon was ſeized with a very ſevere pain of the head, ſickneſs, and vomiting: his ſkin is now very hot and dry; his pulſe beats very quick; his tongue is foul; he has a diſagreeable taſte in his mouth, and is very giddy on uſing the ſlighteſt motion.—To take a powder with one grain of tartar emetic, and 20 grains of ipecacuanha mixed together; and about an hour after its operation is finiſhed, 30 drops of laudanum, with a teaſpoonful of ſweet ſpirit of nitre in a little water; afterwards to begin with the bark.

Tueſday morning, eight o'clock.—He took the emetic laſt night, which operated two or three times, and relieved him much; he alſo took the laudanum, and continued very eaſy till eleven o'clock at night, when he had a return of fever, in conſequence of which he did not begin the bark as had been directed. The fever ſtill continues: he complains this morning of a very ſevere pain in his head: his face is much fluſhed: he is ſick,

and occaſionally vomits what he takes: his pulſe beats one hundred and twenty times in a minute; his ſkin is hot; his tongue rather foul: he is very thirſty: has had no ſtool for two or three days.—To take immediately 8 grains of calomel, and two hours afterwards to begin with the bark, taking two large tea-ſpoonfuls every hour.

At ſix in the evening.—He ſeemed much eaſier; thought the pill afforded him relief, though it produced no evacuation; has had no ſickneſs ſince it was taken: his pulſe beats one hundred in a minute: he is leſs thirſty; and his head-ach is leſs ſevere. Since ten in the morning, near an ounce of bark has been taken and retained. He is to continue the bark during the night, and to take 2 grains of opium at bed-time.

Wedneſday Morning, eight o'clock.—Had a tolerably eaſy night: his ſkin is cool and moiſt, his tongue is cleaner: he has leſs thirſt, and feels no head-ach except when he endeavours to ſit up: has had no ſtool, but is without pain in the ſtomach and bowels: he has taken an ounce of bark ſince laſt night.—To take 3 of the purging pills, and to continue the bark as before.

Eight o'clock in the evening.—This afternoon he had a return of fever, but with leſs ſevere head-ach: he was very thirſty, and his ſkin was rather hot: at preſent he is much eaſier.—To continue the bark, and not to take the opium at night unleſs he has a ſtool previouſly.—He has taken ſince morning near an ounce and a half of bark.

Thurſday, nine o'clock, A. M.—The pills operated twice in the night: he reſted well without the opium: his tongue is clean and moiſt: he has no head-ach, and

feels

feels no complaint but from weakneſs: his ſkin is cool. —To continue his bark as before.

Friday, eight, A. M.—Yeſterday ſuppoſing himſelf recovered, he walked about till he was fatigued, and at the ſame time omitted his bark; whence he had a return of fever in the night. His head-ach is at preſent very ſevere: the face is fluſhed, and the eyes very bright: ſkin hot, pulſe very quick, tongue brown and dry.—To put his feet in warm water for ten minutes, and to go to bed after they are well dried: then to take 20 drops of laudanum, and a tea-ſpoonful of ſpirit of nitre in a little water, and if not eaſier within four hours, 15 drops more of laudanum, and a tea-ſpoonful of ſpirit of nitre.

Eight in the evening.—He was relieved by the firſt draught; but notwithſtanding took the ſecond, which produced a copious ſweat: his ſkin is cool and moiſt at preſent; his head-ach is almoſt gone, but he feels very giddy on raiſing himſelf from the pillow. Since noon has taken half an ounce of bark and retained it.—The bark to be continued as before.

Saturday, eight, A. M.—He ſlept well all night: ſkin cool; no head-ach: he complains of a ſlight ſore throat; has taken one ounce of bark ſince yeſterday at noon.—To gargle with vinegar and water, and to continue his medicines.

Sunday.—He has no complaint but weakneſs; can ſcarcely bear the bark.—To take only 6 drams to-day, and half an ounce to-morrow.

He continued the bark for a day or two longer, gradually diminiſhing the doſe; after which he took a doſe of bitters three times a day for about a week, and had no relapſe.

Mr. G——, aged 26, florid, though of a brown complexion, lately arrived on the coaſt, was ſeized on Tueſday with a ſlight chilly fit, which ſoon went off, but was ſucceeded by ſevere pain in the head, back, and all the limbs. He now complains of great ſickneſs at ſtomach, and thirſt: his mouth is very clammy; the pain in his head is chiefly fixed over his eyes: and his forehead feels to him as if it were bound tight with a cord; his eyes appear ready to project from his head; his ſkin is dry and burning hot.—To take immediately a cupful of a ſolution of 3 grains of tartar emetic in a pint of water; and to repeat the ſame doſe every ten minutes till he vomits. Afterwards to take 30 drops of laudanum, with a tea-ſpoonful of ſweet ſpirit of nitre in water.

Wedneſday Morning.—The vomit operated, though not until he had taken nearly the whole: it diſcharged from his ſtomach a very offenſive maſs, and conſiderably relieved the head-ach. An hour afterwards, he took the laudanum, which occaſioned a copious ſweat through the night. Within two hours after taking the draught, the pains of the head and limbs were almoſt intirely gone. He began then to take two large tea-ſpoonfuls of bark every hour in water, and has already taken an ounce. At preſent he is free from fever: his ſkin is cool and moiſt; he has no thirſt; his tongue appears a little white, but it is moiſt; his urine is high coloured. He ſtill feels a very trifling pain in his head, with ſlight giddineſs on raiſing it. To continue the bark ſo as to take an ounce and a half before bed-time, when he is to have the laudanum draught.

Thurſday Morning.——He has taken two ounces and a half of bark ſince Tueſday night; had an eaſy night

and

and ſome ſleep; feels ſcarcely any complaint this morning but weakneſs; he has no thirſt or pain; his urine is of a lighter colour, and his appetite is returning.—To take the ſame quantity of bark to-day as yeſterday; and the opiate draught at night.

Thurſday Evening, eight o'clock.——Thinking himſelf almoſt well, he went on ſhore and ſtaid near three hours: the day was cool, and he did not ſeem fatigued; yet, ſoon after his return on board, he was ſeized with a violent, though ſhort cold fit, which was followed by great heat, and a ſevere pain in his head: his eyes were hot and watery, and unable to bear the light. He had his feet put into warm water for five minutes and then rubbed dry: when in bed he took 30 drops of laudanum, and a tea-ſpoonful of antimonial wine in water.

Friday Morning, eight o'clock.——He ſweated profuſely all night: his ſkin is rather cooler this morning, and moiſt; but his pulſe is ſtill quick; his head-ache is very ſevere; his face red and flushed; his eyes are bright; his tongue white and dry; he is very reſtleſs and anxious.—To begin immediately with the bark, and to take two large tea-ſpoonfuls every hour: for his thirſt he is to take 30 drops of ſweet ſpirit of nitre every hour or two, in a glaſs of water.

Six o'clock in the evening.—He continues much the ſame: the head-ach is ſtill ſevere, and there is alſo a tightneſs over his forehead. His eyes are bright: his body has been kept ſufficiently open. He has taken an ounce of bark ſince morning.——To continue the bark during the night, and to have his draught at bed-time with 30 drops of laudanum. The feet to be bathed in warm water.

Saturday Morning.—After taking the laudanum he felt eaſier, paſſed a tolerably good night, and ſweated much. The head-ache and tightneſs over his forehead are almoſt gone: his face is leſs fluſhed; his eyes are not ſo bright: and he is leſs reſtleſs. His urine is ſtill high coloured; his ſkin is cool and moiſt; and his thirſt is much abated. He took yeſterday an ounce and a half of bark. He is to take the ſame quantity to-day, to have the laudanum at night, and to put his feet into warm water.

Sunday Morning.—He paſſed a very eaſy night; complains of nothing to-day but great weakneſs and giddineſs when he attempts to ſit up. His ſkin is cool; his urine of a lighter colour, and his appetite is returning. He took an ounce and a half of bark yeſterday.——To have the ſame quantity this day: to take an ounce on Monday, 6 drams on Tueſday, and thus to diminiſh it gradually.—The laudanum only to be uſed occaſionally.

This gentleman recovered in a few days; but as he felt weak he was deſired to take bitters for ſome time.

When perſons recovering from fever leave off their medicines too ſoon, they are not only ſubject to a relapſe from very ſlight cauſes, but are uſually troubled for a long time with weakneſs, loſs of appetite, and frequent ſlight head aches, which become very ſevere on uſing any exerciſe: the ſkin is hot and dry, eſpecially towards evening and during the night: a great heat is felt inwardly: there is likewiſe a very diſagreeable ſenſe of burning in the palms of the hands and ſoles of the feet. Sometimes there are ſlight ſhiverings and chills down the back, ſucceeded by heat, or by partial ſweats on the breaſt,

breaſt, back, &c. the knees tremble, and ſeem ſcarce able to bear the weight of the body. By taking bitters, or a doſe of the colombo powder, as already recommended, three or four times a day, for a week or two, theſe ſymptoms will diſappear: but if neglected, they may continue to trouble the patient for ſeveral months.

That dreadful ſcourge of Europeans, the YELLOW FEVER, appears to be almoſt confined to the Weſt India Iſlands; and as it occurs chiefly in ſituations on ſhore where medical advice can be procured, it will only be neceſſary here to point out the chief ſymptoms which diſtinguiſh it from the common remittent fever, in order that the patient may not be lulled into ſecurity, but call in aſſiſtance as expeditiouſly as poſſible.

The Yellow Fever moſtly affects perſons juſt arrived from Europe, or from the northern parts of America; particularly thoſe of a robuſt, full habit of body, who appear in the higheſt health. It is moſt prevalent during the hotteſt months of the year, and is often a conſequence of too violent or too long continued exerciſe in the ſun. It is more frequent on the ſea-coaſt, and in a heated dry ſandy ſoil, than in the interior parts of the country: and in mountainous ſituations it rarely occurs. The remittent fever on the contrary, appears chiefly in low ſwampy ſituations, in uncultivated places, and ſtagnant air; and it chiefly attacks ſuch as have reſided ſome time in the Weſt Indies, eſpecially when weakened by previous illneſs, or of a delicate, relaxed habit of body. The yellow fever attacks very unexpectedly, and with very great violence, while the patient thinks himſelf in the most vigorous ſtate of health. There is a violent

pain in the head, loins, and thighs, much greater than what is ever complained of in the remittent fever. The face is uncommonly flushed; the eyes are unable to bear the light; the patient appears confused, articulates indistinctly, and has in other respects the appearance of being intoxicated. The stomach is generally affected with vomiting, and with a sensation of burning pain. There is great restlessness, and an indescribable degree of anxiety. The strength is so exceedingly depressed, that the patient often faints on attempting to rise from bed. During the early part of the disease, his bowels are obstinately costive. Sometimes within twelve, or twenty-four hours, or even later from the first attack, the violence of the above symptoms abates so considerably that he imagines himself almost well, the stomach being settled enough to retain nourishment, and the head quite composed. This however is but a deceitful calm. In a few hours other symptoms appear, which portend great danger: a slight degree of yellowness is observed in the white of the eye, which spreads over the face, neck, and shoulders, until the whole body acquires more or less of an orange tint; and this it is which gives the name to the disease. The yellow tinge of the skin sometimes appears within a few hours from the first attack, but frequently not until the second or third day: it is not peculiar to the yellow fever, but sometimes occurs in the remittent, where it is much less dangerous. The stomach is again disordered, and vomiting succeeds. The discharge is at first, small in quantity, but gradually increases, until it becomes enormous, and greatly exceeds the quantity of fluids taken in. The matter vomited up differs from what is brought up in remittent fever, in not being

being bilious: at firſt it is a clear fluid, but when the diſeaſe has continued for ſome time, it depoſits a browniſh ſediment, which gradually turns darker, until it becomes almoſt black, or like the grounds of coffee; hence the denomination of "black vomit." The ſtools become very frequent towards the end of the diſeaſe, and reſemble the diſcharge from the ſtomach. The urine acquires the ſame dark colour. Blood is frequently diſcharged from the noſe, mouth, and other parts of the body. All theſe ſymptoms rapidly increaſe in violence; the anxiety and reſtleſſneſs become ſo great as to require force to keep the patient in bed. Convulſions come on, in one of which the patient generally expires.

Theſe ſymptoms may ſuffice to point out this fatal diſeaſe, and warn the patient or his friends of impending danger. In the abſence of medical aſſiſtance, which ought to be procured as early as poſſible, it may be adviſeable to evacuate the bowels; for which purpoſe 8 grains of calomel and as much jalap, are to be given in a powder mixed with molaſſes, or formed into pills, and repeated every two hours until ſtools be procured. A clyſter compoſed of two ounces of ſalts diſſolved in a pint of warm water, may be adminiſtered and repeated in the intervals of taking the pills. Flannels dipped in hot water and wrung very dry, may be applied to the belly for fifteen or twenty minutes, and when the ſkin is well dried, a large bliſter may be applied. When the pills and purging clyſters have operated ſufficiently, if the head be ſtill much pained, a large bliſter may be applied over the whole, or to the back part. The calomel may be given in ſmaller doſes, viz. two grains, every three or four hours, and if it prove purgative, one or two grains of

opium may be added, with 10 grains of kino, which laſt may be repeated occaſionally. When the gums feel tender, an effect not often produced, the calomel may be left off. The mode of uſing it is noticed under the articles Rheumatiſm and Venereal Diſeaſe. The diet in this diſeaſe may be the ſame as for the remittent fever; and, when the feveriſh ſymptoms have abated, an infuſion of bark, or bitters, or the powder of colombo, may be adminiſtered. It will be found very uſeful to waſh the patient's body with vinegar, or with lime juice, and to repeat it frequently. Bark, wine, and opium, muſt be carefully avoided, and the diet ſhould conſiſt of ſago, tapioca, rice, gruel, &c. To diminiſh the extreme reſtleſſneſs, the patient may be laid in a hammock, and ſwung as long as it is agreeable to him. The hammock ſhould be ſhallow, in order to avoid heating the patient. Perſons going to the Weſt Indies ought to chooſe the cooleſt time of the year to arrive there, which is from December to April. They ought, if poſſible, to occupy a healthy ſituation in the mountains, where they will become inured to the climate with very little riſk. They ſhould avoid fatigue, particularly in a hot ſun: in other reſpects they may attend to the general directions given in the beginning of this Treatiſe. New comers, who are remarkably robuſt, beſides attending to the rules abovementioned, ought to uſe calomel as a purgative, occaſionally; or if they be much affected with head-ach, a little blood might be taken away. But the beſt general plan for every one, and that which will ſuperſede the neceſſity of blood-letting is, to begin upon an alterative courſe of mercury, and continue it for two or three weeks, or a month, ſo as to keep up a ſlight degree of ſoreneſs of the mouth.

The

The DYSENTERY, or FLUX, is not ſo frequent a diſeaſe about Sierra Leone, and on the Windward Coaſt, as it is on the Gold Coaſt, and lower down. It ariſes in many inſtances from infection, and ſpreads rapidly, proving very often fatal. This complaint, in general, begins like the fever, with cold ſhiverings &c. ſometimes with ſickneſs and vomiting. There is always a great pain in the belly, eſpecially about the navel; the ſtools are more frequent than uſual, but ſcanty, and have a peculiarly fetid ſmell. They ſoon loſe their natural appearance, becoming frothy, ſlimy, and mixed with blood. As the diſeaſe advances, the pains in the bowels are much aggravated: there is a conſtant deſire to go to ſtool, and a violent ſtraining, though nothing more is evacuated than a little ſlime, or blood. With the ſtools are often mixed hard lumps or knots: and when the caſe has become inveterate, ſubſtances reſembling pieces of ſkin are diſcharged with the excrement. When the ſtools chiefly conſiſt of ſlime, this diſeaſe has been called the white flux; when they are mixed with blood it is called the bloody flux.

The dyſentery ariſes from expoſure to cold after ſtrong exerciſe, or to the night air and dews in an unhealthy country. It is often produced by bad water, bad diet, unripe four fruits, or by going to a neceſſary uſed by perſons labouring under the diſeaſe: it is alſo a frequent conſequence of fever.

In the treatment of dyſentery, our endeavours muſt be applied to procure a diſcharge of the morbid contents of the bowels, by ſuitable purgatives: for this purpoſe an ounce of Epſom ſalt may be diſſolved in about a pint of hot water, as much lime or lemon juice and ſugar being

added, as will make it a pleaſant beverage. Some perſons chooſe to make the further addition of a table-ſpoonful of brandy, rum, or Teneriffe wine. Of this purging potion the patient ſhould take a ſmall tea-cupful every hour till a ſtool is produced. After the operation of the ſalts the ſtools will be larger, and of a more natural appearance: and little hard lumps will be paſſed, by which the teneſmus, or ſtraining to go to ſtool, will for a time be relieved. If the above-mentioned quantity of ſalts fail in procuring a proper evacuation, the beverage may be repeated in about half the former quantity. When a ſtool has been produced, the patient may take at bed-time a grain of opium, and 3 grains of calomel, which may be repeated in four or ſix hours if the griping be ſevere. Fomentations repeatedly applied to the belly likewiſe afford a great relief in the griping. On the following morning, the purging beverage ſhould again be taken in the ſame manner, and the pill with the fomentations may be repeated at night. If the ſtools continue ſmall, and the teneſmus be ſevere, the purging beverage ſhould be employed for three or four ſucceſſive days. In ſome caſes a grain of emetic tartar may be added to it, which will render its operation quicker and more effectual. Caſtor oil agrees better with ſome perſons than the ſalt; it is taken in doſes of one or two table-ſpoonfuls every hour till it operates. Notwithſtanding the apparently great weakneſs of the patient, and the number of irritating motions, it will be found that his ſtrength will increaſe in proportion as the ſtools become freer and larger by the uſe of evacuant medicines. The griping produced by ſalts or caſtor oil, is not only much leſs ſevere than that from the diſeaſe, but it is of a different kind

kind and differently ſeated. When the pain continues violent, notwithſtanding the uſe of fomentations, &c. a bliſter may be applied over the part where the pain is moſt ſevere.

The fever is ſometimes joined to the flux, and increaſes its danger. The preſence of fever will eaſily be diſcovered by the returns of paroxyſms, in which the patient is worſe at one time of the day than another. In this caſe, ſtools being firſt procured, Peruvian bark muſt be given according to the plan formerly directed. Should the bark prove purgative, or otherwiſe diſagree, it may be changed for the Anguſtura bark.

In fluxes of long ſtanding, where there is but little teneſmus, and the patient is weakened by the continuance of the diſcharge, a grain and a half, or two grains of opium, with two grains of calomel, may be taken every night at bed-time, until a braſſy taſte is perceived in the mouth, when it ſhould be diſcontinued. At the ſame time the patient may take a tea-ſpoonful of Anguſtura bark four or five times a day: this will not only reſtrain the violence of the diſcharge, but it will alſo brace the ſtomach and bowels, and finally reſtore the patient to his former ſtrength.

When the teneſmus, or conſtant uneaſy inclination to go to ſtool is abated, if the diſcharge frequently continues as in a common looſeneſs, with a ſenſation of rawneſs internally, an ounce, or an ounce and a half of gum arabic, may be diſſolved in a quart of rice or common water, and drank in the courſe of the day. The Anguſtura bark is the beſt medicine at this time, if care be taken to prevent its binding too much, by the occaſional uſe of a gentle purgative. The diet may conſiſt of boiled rice, ſago, or tapioca,

tapioca, with wine, or a little brandy and ſugar, tea, boiled flour, broth, &c. The patient may alſo take the juice, not the pulp of ripe fruits, as oranges, pine-apples, &c. but if it ſeems to ferment, and occaſions an unpleaſant diſtenſion of the ſtomach, it muſt not be perſiſted in. It may be obſerved in general, that the uſe of fruits is more allowable at the beginning of the diſeaſe, than when it has continued for a length of time.

The dyſentery or flux being infectious, in order to prevent its ſpreading, the greateſt attention muſt be paid to cleanlineſs and ventilation. The place where the ſick perſons ſleep ſhould be kept cool and airy: the excrements, &c. ſhould be removed as ſoon as poſſible: and none of the patients ſhould be permitted to go to the neceſſary uſed by thoſe who are in health.

Caſes of Flux.—T. S. æt. 40.—Sunday. For four days paſt has been affected with very ſevere griping and purging. His ſtools conſiſt chiefly of blood and mucus; they are very numerous and ſmall in quantity. He is harraſſed with a conſtant, uneaſy deſire to go to ſtool, and with much ineffectual ſtraining or preſſing. His ſkin is hot, his tongue white: he is very thirſty: has no appetite, and feels much debilitated. He took yeſterday 20 grains of ipecacuanha, and 2 grains of tartar emetic, which did not make him vomit. At bed-time he took a grain of opium, with two of calomel, and repeated the doſe four hours after; but had notwithſtanding a very reſtleſs night.—To take by cupfuls an ounce of ſalts diſſolved in a pint of water, 1 grain of emetic tartar being added. To have at bed-time a grain of opium, and 2 of calomel as before, and to repeat the ſame in four

four hours if the pain required it: alſo to have the belly fomented.

Monday Morning.—The ſalts operated very gently, producing ſeveral ſtools, chiefly compoſed of ſlime and blood, but intermixed with a number of hard knots and lumps. He felt much eaſier during the operation. Towards evening the griping and ſtraining at ſtool returned very ſeverely, but were ſomewhat relieved by the pill, and by the fomentations. He was however obliged to take the ſecond pill, which procured a ſhort reſpite from pain. At preſent the griping, purging, and deſire to go to ſtool are very ſevere. He feels weak, and has much thirſt. To repeat the ſalts as before, and the pills at bed-time, with the fomentations.

Tueſday Morning.—The ſalts operated very well; and many hard lumps were evacuated; the griping and forcing returned towards evening, but were relieved by the pills and fomentations, which procured him a comfortable night.

Wedneſday.—The ſtools procured by the ſalts yeſterday had leſs blood in them than uſual; they were alſo larger, and of a more natural appearance: the preſſing at ſtool is now nearly gone: his thirſt is abated, and he feels more comfortable. To omit the ſalts to-day, and only to take the pills at night.

Thurſday.—His ſtools appear natural, and are unattended with griping; his appetite is returning. To take a doſe of bitters three times a day; and if he becomes coſtive, or feels the leaſt return of the preſſing, to repeat the ſalts.

Mr. W. aged 30.—Tueſday.—He has been affected with

with ſevere twiſting pain in his bowels for two days paſt, during which time he has not had a natural ſtool; but has very frequently voided ſmall quantities of frothy, bloody ſlime. He has alſo a conſtant uneaſy deſire to go to ſtool, with much preſſing and ſtraining; he is very thirſty, and his ſkin is hot.—To take in the evening 20 grains of ipecacuanha, and 2 grains of tartar emetic; and at bed-time a pill containing 1 grain of opium, and 2 grains of calomel; which may be repeated.

Wedneſday Morning.—He vomited only once laſt night: he fell afterwards into a ſweat, which was checked by his being expoſed to the cold air. The griping is very ſevere this morning, and much blood and ſlime has been diſcharged: the preſſing and ſtraining at ſtool is alſo very diſtreſſing. To take immediately an ounce of Epſom ſalts diſſolved in a pint of water; at bed-time to repeat the pills, and to foment if the pain be ſevere.

Thurſday Morning.—The ſalts operated very well, and diſcharged many lumps or knots: in conſequence of which the griping was much abated. He was greatly relieved by the fomentations, and had a little reſpite during the night: as the ſtraining and preſſing at ſtool ſtill continues, and blood and ſlime are ſtill voided, he is to take the ſalts again as before, and to have the pills at bed-time, with the fomentations.

Friday Morning.—Feels much ſtronger this morning; had a natural ſtool yeſterday from the ſalts; he had no ſtool in the night, but had one this morning with little blood, and had no griping or ſtraining; he is to leave off the ſalts to-day, but to take the pills at night without the calomel.

He

He continued to recover, and took no more medicine until a week afterwards, when the ſalts were repeated.

Diarrhoea, or Looſeneſs, is a diſeaſe which occurs frequently. It ariſes from bad water, bad diet, unripe ſour fruits, or from eating ſomething offenſive to the ſtomach. In perſons of a delicate and irritable conſtitution, any ſudden expoſure to cold, after being warm, checks the perſpiration, and immediately produces a diſorder of the bowels. This complaint when attended to early, may be cured without much difficulty; but if it be neglected, the great evacuations may exhauſt the patient's ſtrength, bring on a dropſy, and prove fatal. When it ariſes from ſomething which diſagrees with the ſtomach, the cure muſt be accompliſhed by an expulſion of the offending ſubſtance. For this purpoſe 20 grains of ipecacuanha may be taken in the evening, 30 drops of laudanum, with a tea-ſpoonful of ſpirit of nitre at bed-time, and in the morning 30 grains of rhubarb, with a little ſpirit; or a table ſpoonful of caſtor oil. In ſlighter caſes the rhubarb, with or without the laudanum at night, may be ſufficient: but when the looſeneſs has continued for ſome time, and ſeems likely to prove obſtinate, it is proper to begin with an emetic, and give the rhubarb afterwards. The ipecacuanha muſt be given alone in this complaint; as emetic tartar would rather tend to increaſe it. When it has originated from ſudden expoſure to cold, 30 drops of laudanum, with a tea-ſpoonful of ſpirit of nitre, or a little antimonial wine, may be mixed with a glaſs of warm wine, or brandy and water, and taken on going to bed. Another draught of the ſame kind, but without the laudanum, may be taken

in

in the courſe of the night, if a ſweat ſhould not be produced by the former one.

When the bowels continue weak and irritable after the uſe of the above medicines, a tea-ſpoonful of Anguſtura bark taken three or four times a day in water, ſeldom fails to give relief. The gum arabic is likewiſe uſeful, being added to the patient's uſual drink.

There is a diſeaſe intitled CHOLERA MORBUS, which has, on its firſt appearance, been miſtaken for a diarrhœa, or the flux: as it often proves ſuddenly fatal, the niceſt care and diſcrimination are neceſſary at its commencement.

The perſon affected with it is ſeized on a ſudden with violent purging and vomiting, by which a large quantity of a greeniſh or yellowiſh coloured fluid is diſcharged. There is an exceſſive thirſt, yet every thing that is drank is immediately thrown up again. A burning pain and inexpreſſible anxiety are felt about the pit of the ſtomach, where the leaſt preſſure cannot be borne. The patient is reſtleſs and agitated, conſtantly moving from one part of the bed to another. His ſkin is very hot and dry; but his hands and feet are in general cold. Cramps are felt in various parts of the body, chiefly in the thighs and legs. The ſtools are ſo numerous and ſo large, that his ſtrength is ſpent in a few hours. Cold ſweats and fainting then come on, and are ſucceeded by a troubleſome and painful hiccup; and laſtly by convulſions, in which the patient ſometimes expires after an illneſs of twenty-four hours.

This diſeaſe is almoſt always produced by ſudden changes from heat to cold: thus it takes place in thoſe who

who after expoſure to a hot ſun, remain long in a current of cold air; likewiſe in perſons expoſed to the night air, and dews, thinly clad, after fatiguing exerciſe, or labour in the woods on a hot day.

The Cholera is diſtinguiſhable from a common purging, or from the flux, by the violence of all the ſymptoms, by the very large evacuations upwards and downwards; by the extreme weakneſs which ſuddenly comes on; and by the cramps of the limbs.

The principal aim in the treatment of this diſorder, is to check the profuſe evacuations, and to excite a perſpiration. For this purpoſe flannels wrung out of hot water are to be applied over the ſtomach and belly * for ten or fifteen minutes: after which 5 drops of laudanum, and 20 of ſpirit of nitre, may be given every hour till the vomiting and purging abate. At the very beginning of the diſeaſe, a few cups full of warm broth, warm water, or water gruel, ſerve to render the vomiting more eaſy, and to clear the ſtomach before the laudanum and other remedies are applied. If the draught ſhould be immediately thrown up, a ſimilar one may be given in half an hour; if this ſhould not be retained, an interval of an hour muſt be left before another is adminiſtered: in the mean time the hot flannels may be applied firſt to the ſtomach, and then for an equal time to the legs, care being taken to dry them well afterwards. As ſoon as a ſweat is produced by theſe means, the vomiting generally ceaſes, and the opium becomes no longer neceſſary. If the purging ſtill continues, the patient's ſtrength muſt be ſupported by ſago, ſoup, and a little warm wine and water made

* In the manner deſcribed page 45.

made agreeable with acid and ſugar: but only a ſmall quantity ſhould be given at once, through fear of renewing the ſickneſs. The ſweat may be kept up by giving 30 or 40 drops of ſpirit of nitre every two hours. If the purging ſhould ſtop ſuddenly, and any uneaſineſs be felt in the bowels, a few grains of calomel, or ſome other gentle aperient medicine will be neceſſary. As the ſtrength is ſo much reduced by this complaint, it will be proper for the patient to take 20 grains of the colombo two or three times a day, for ſome time after the complaint has ceaſed.

Caſe of the Cholera Morbus.—M. J. aged 22. Tueſday Morning.—After having yeſterday been much expoſed to a hot ſun, he ſtood ſome time in a cold wind; and was, in conſequence, ſeized at night with a diſcharge upwards and downwards of much green and yellow matter. This was attended with a ſenſe of inward burning, and a great pain at the pit of the ſtomach, when touched with the hand. There was alſo great anxiety and reſtleſſneſs, with ſevere and painful cramps of the legs and thighs. The above ſymptoms continued through the whole night: the vomiting and purging are yet very ſevere, and have produced great weakneſs: the pulſe is very quick: the hands and feet are becoming cold. Fomentations are to be applied to the ſtomach for ten minutes, and repeated every half-hour: 5 drops of laudanum, and 20 of the ſpirit of nitre, are to be taken immediately afterwards, and alſo to be repeated in half an hour.

Six o'clock in the evening.—Has not vomited ſince the firſt doſe of the laudanum. He felt relief from the pain

pain after the ſecond doſe, and after the fomentation. The latter was therefore repeated every half hour; but the laudanum and ſpirit of nitre were not given again till two hours had elapſed. There is ſtill a ſlight pain and ſoreneſs over the ſtomach when preſſed. He feels extremely weak and languid. Having now taken 30 drops of laudanum, he was deſired to diſcontinue it, and only to uſe the fomentations every two or three hours.

Wedneſday.—The vomiting and purging returned, in the courſe of the night, with much pain, not of the ſtomach, but in the bowels, chiefly round the navel. The pain was relieved by 10 drops of laudanum, and by fomentations to the belly repeated every half hour. As the vomiting ſtill continued, 10 drops of laudanum were given two hours after the firſt draught, by means of which, and the fomentations, he fell into an eaſy and refreſhing ſleep. He is this morning free from pain, but very weak and languid; has had two looſe ſtools ſince the laſt doſe of laudanum.

This patient had no return of the diſorder; and he recovered without the further uſe of medicine, being averſe to bitters, or other ſtrengthening remedies.

Dropsical Swellings of the legs and thighs very frequently appear after patients have been much debilitated by the fever, ague, or flux: they are ſometimes produced by poor living and hard labour; and uſually attend large ulcers of the legs. As the complaint always ariſes from weakneſs, our chief view muſt be to evacuate the water which cauſes the ſwelling, and afterwards to prevent its return by ſtrengthening the patient's conſtitution. In this diſeaſe a dent or impreſſion

may

may always be made on the leg or foot when preſſed by the fingers. The ſwelling is very much diminiſhed in the morning after a good night's reſt, and appears again towards night, after walking or hanging the legs down. It is generally moſt viſible about the ancles, but ſometimes extends to the thighs and belly.

The ſwelling may be reduced by promoting the ſecretion of urine, which is very ſcanty in this complaint. Cream of tartar is one of the beſt remedies for that purpoſe: a tea-ſpoonful of it may be taken in moſt caſes three or four times a day, mixed with a little molaſſes or honey; but as it is a purgative medicine, the doſe muſt be regulated ſo as not to produce more than two ſtools in the day. A cupful of the bitters ſhould be taken after each doſe of the ſalt. The legs ſhould be laid up during the day time, and rubbed gently with the hand. Swellings of this kind are uſually removed in the courſe of a week: it will however be proper to continue the uſe of the bitters for ſome time longer.

When the ſwelling has ſubſided during the night, a tight ſtocking put on in the morning, or a flannel bandage about three fingers breadth, and ſeven or eight yards long, rolled round the leg as high as the knee, beginning at the foot, often prevents its return in the courſe of the day.

Perſons who have been long affected with fever, or more eſpecially with an ague, are very liable to have a ſwelling and hardneſs of the belly, with or without a ſwelling of the thighs and legs. It ſometimes happens, while the body is thus ſwelled, that the limbs are ſhrunk and emaciated. The ſwelling is generally cauſed by an enlargement of the ſpleen or milt, called in England

England the AGUE CAKE: it may be felt on the left ſide projecting from under the ribs, and ſometimes appears to fill up a great part of the cavity formed by them. Along with this complaint there is often water in the belly, the fluctuation of which may be perceived by laying one hand upon the ſide of the belly, and giving a gentle tap on the other; the fluid being felt to ſtrike the fingers on the oppoſite ſide, in the ſame manner as water would do in a bladder nearly full. In this ſpecies of dropſy, a trial may be made of the medicines above recommended for ſwellings of the legs and thighs, though with leſs hope of ſucceſs. When the enlargement of the ſpleen conſtitutes the whole diſeaſe, no water being contained in the belly, very little indeed can be done to remove the ſwelling; the patient however may be comforted with the aſſurance, that, if care be taken, he will not become worſe, but probably enjoy many years of good health. Mercury has ſometimes been given in ſuch caſes; it has always, however, injured the health of the patient, without having any effect whatever upon the ſwelling. The beſt plan of treatment is to reſtore health and vigour, by giving a tea ſpoonful of bark three or four times a day, or a cupful of the bitter infuſion; and twice a week, if the ſtate of the bowels permit, a table ſpoonful of the purging ſalt. Should the perſon affected be in tolerable health, it will be moſt adviſeable to leave to nature a complaint which often gradually diminiſhes without the aid of medicine.

TETANUS, or LOCKED JAW, is a diſeaſe very frequent in hot climates; it has not however been obſerved at

Sierra

Sierra Leone, and it appears to be ſcarcely known upon the coaſt of Africa. It always occurs during the hotteſt ſeaſons. Although the diſeaſe receive its name from the lower jaw being cloſely ſhut or locked by a ſtrong contraction of the muſcles, yet this is not the only ſymptom of conſequence. The muſcles of the head and neck becoming ſtiff and hard, prevent the patient from bending his neck; and the head is often forcibly retracted. There is a ſevere pain at the ſtomach, ſhooting through to the back: the muſcles of the back become ſo rigid and contracted that the patient can neither raiſe himſelf nor ſtand upright; and the body is frequently bent backwards into the form of an arch. When the diſeaſe is more advanced, the muſcles of the legs, arms, and almoſt every part of the body, are affected in like manner. The contractions ſometimes relax for a few minutes, and then return with increaſed violence: the leaſt motion or noiſe, or an attempt to ſwallow any thing, will occaſionally bring them on. The patient, though ſuffering under exquiſite torture, generally retains his ſenſes until convulſions take place, and put a period to his ſufferings. This diſeaſe is occaſioned by wounds, ſometimes of ſo ſlight a kind as not to be noticed, but eſpecially by punctured wounds; alſo by bruiſes, and other external injuries. It is frequently brought on by exceſſive labour, or any kind of fatigue; by expoſure to cold after having been greatly heated; by ſitting in wet clothes; and particularly by ſleeping in the open air at night after a very hot day. The jaws are not affected until ſeveral days after the above-mentioned cauſes have been applied: when therefore ſlight convulſive twitches are felt in them, or in the temples, with ſome difficulty of ſwallowing, and a degree of ſtiffneſs in the muſcles

of

of the head and neck, there is reaſon to apprehend this diſeaſe. When locked jaw is brought on in conſequence of a wound, this latter is generally found free from pain, ſwelling or inflammation. To produce in it a ſalutary degree of pain and inflammation, it is recommended to fill the wound with lint, dipped in oil of turpentine; and if the wound be ſmall, as when from a puncture, it ought to be enlarged, and treated in the ſame manner. The moſt powerful means are to be uſed to ſtrengthen the ſyſtem; the patient muſt take a dram of bark in port, ſherry, Teneriffe or Madeira wine, every hour; or when the ſtomach cannot bear ſuch a quantity, every two hours. To diminiſh the violence of the pain, two or three grains of opium may be given and repeated every two hours, with the bark and wine. This quantity of opium is very ſmall when compared with the doſes which have been ſometimes uſed in this diſeaſe; but it will not be prudent to exceed the quantity of a ſcruple or half a dram in twenty-four hours, unleſs with the approbation of a medical man. During the exhibition of wine, bark and opium, it has frequently been found of great uſe to daſh a few buckets of cold water over the patient's naked body, which muſt be extremely well dried afterwards; the cold water may be repeated every two or three hours, if it appear to be attended with beneficial effects, ſuch as a diminution of the violence of the ſpaſms, and rather an increaſed degree of heat over the whole body. But if after having repeated it once or twice, the extremities feel cold, or a cold ſweat break out, this practice muſt be laid aſide, as it is of great conſequence to preſerve an uniform heat on the ſurface of the body. When the heat of the ſkin appears leſs than natural, it muſt be

creaſed by rubbing it with warm flannels, and by the application of hot water in bottles, hot ſalt, or heated bricks to the feet. This diſeaſe is more dangerous when produced by a wound than by cold, and will require the means above-mentioned to be more ſteadily purſued, and to be more early put in practice. When the diſeaſe does not prove fatal in the firſt week, there are very great hopes of the patient's recovery.

A Stroke of the Sun, Coup de Soleil, as it is called, ſcarcely ever occurs at Sierra Leone; but after long expoſure to a hot ſun, a very particular fulneſs is felt in the head, as if it were ready to burſt: there is at the ſame time a diſagreeable beating in the temples, and a ſhortneſs of breathing, or panting. Theſe ſymptoms are not dangerous, but in general ceaſe on reſting in the ſhade, or waſhing the face, or dipping the hands in cold water. If there be frequent returns of the beating and fulneſs of the head, a gentle doſe of ſalts taken once or twice a week is an uſeful palliative.

When, however, in conſequence of a long and fatiguing march in the ſun-ſhine, or after ſleeping in the open air, with the head uncovered, out of the ſhade, a perſon falls down inſenſible, as in a fit of apoplexy, means of relief muſt inſtantly be applied, or life will ſoon be extinguiſhed. The patient ſhould be carried to a cool ſhady place, his head and breaſt muſt be raiſed from the ground, and a current of air be produced by fanning him. Plenty of cold water muſt be daſhed over his body, which may be rendered ſtill cooler by adding to it vinegar, or diſſolving in it ſome common ſalt. If in a convenient ſituation, the body may be placed

placed up to the breaſt in warm water, while at the ſame time cloths dipped in very cold water are applied to the head and neck, and repeated before they have acquired any warmth. A clyſter may alſo be given, compoſed of a quart of cold water, in which, if the patient be coſtive, two ounces of Epſom ſalt may be diſſolved juſt before it is adminiſtered. Common ſalt, nitre, &c. render water cooler only during the time they are diſſolving. A conſiderable degree of cold is alſo produced by evaporation: thus, a bottle of any kind of liquor, wrapped in a cloth, frequently wetted, and expoſed to a ſtrong wind, or even to a hot ſun, becomes cool while the water flies off or evaporates.

Hepatitis, or Inflammation of the Liver, is a diſeaſe very frequent in the Eaſt and Weſt Indies, eſpecially in the former. It uſually commences with ſome degree of coldneſs and ſhivering, to which ſucceeds a conſiderable heat over the whole body. An acute pain is felt at the pit of the ſtomach, or on one ſide, generally the right ſide, immediately under the edge of the ribs: this pain is greatly aggravated when the patient coughs, ſneezes, or makes a deep inſpiration; it is alſo increaſed by preſſing upon the part, or lying upon the oppoſite ſide. The ſkin is, for the moſt part, dry and burning; the pulſe is very quick; there is a great thirſt, frequently vomiting, and extreme reſtleſsneſs. A pain more or leſs acute ſhoots up towards the collar bone or ſhoulder of the affected ſide. The patient complains of a degree of numbneſs in the arm, moſt frequently in the right. When the above ſymptoms occur, the diſeaſe has generally come on ſuddenly and without previous

ſickneſs; but it ſometimes is ſo ſlow in its progreſs, and the ſymptoms are ſo ſlight, that the patient ſcarcely ſuppoſes himſelf unwell. In this caſe there is a ſenſe of weight and fulneſs about the pit of the ſtomach and under the ribs: the pain ſhooting from the ſide to the ſhoulder is of a dull heavy kind, neither increaſed by reſpiration nor coughing, and ſcarcely affected by preſſure. The complexion changes to a dirty ſallow hue, or to an high orange colour, as in jaundice, circumſtances which often indeed give the firſt alarm. The urine is highly coloured, the ſtools are white like clay, and the body is generally coſtive.

This diſeaſe is occaſioned by a variety of cauſes; by external violence from falls, bruiſes, wounds, &c. by long expoſure to a very hot ſun, by haſtily cooling the body after it has been greatly heated, by the abuſe of ſpirituous liquors, and not unfrequently by allowing agues to run their courſe, inſtead of putting a ſtop to them by a proper uſe of the Peruvian bark.

This complaint may be expected to terminate favorably when the fever abates and the pain gradually becomes leſs; when the urine lets fall a ſediment, and when the bowels, from being coſtive, become looſe, and the patient feels relieved by the evacuations. There is reaſon to fear that the diſeaſe will terminate in ſuppuration, or in the formation of matter, which burſting inwardly may carry the patient off ſuddenly, or burſting outwardly may cauſe him to waſte away as in a conſumption, when, notwithſtanding the means employed, the fever and pain ſtill continue violent; when a ſenſation of weight is felt, and eſpecially when the patient feels frequent chilly fits or ſhiverings. When the pain ſuddenly

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ceaſes, the pulſe becoming quick and ſmall, the ſtrength failing, and the extremities being cold, while the patient's face is covered with a cold ſweat, and his features ſeem altered, mortification has taken place, and death is faſt approaching. When the diſeaſe has been ſlower in its progreſs, and not attended with much pain, if left to itſelf, it commonly renders the liver ſcirrhous or hard, ſometimes enlarging it very much, at other times diminiſhing it in ſize: in either way it renders the liver incapable of performing its office, and lays the foundation for dropſy and other fatal diſeaſes. When the pain is ſo ſevere as to render breathing difficult, it becomes neceſſary to take away a little blood: the quantity to be taken can only be determined by the ſeverity of the pain and the age and ſtrength of the patient; but it will perhaps not be proper to exceed eight ounces, or about half a pint. A bliſter, larger than the hand, muſt be applied over the pained part, and if the pain be not removed by the firſt, another bliſter may be applied as ſoon as the part is healed. When there is ſickneſs at ſtomach and vomiting, together with coſtiveneſs, a dram of magneſia, mixed in a cup of water, may be ſwallowed, taking immediately after it another cup of water, made ſour with vitriolic acid, as directed page 20, on ſea ſickneſs. If the bowels be looſe, the ſalt of tartar and lemon juice may be uſed inſtead of the magneſia. If this plan does not ſucceed in opening the bowels, a doſe of Epſom ſalts, caſtor oil, &c. may be taken and repeated until the full effect be produced. At the ſame time it will be proper to commence the mercurial plan: 2 grains of calomel, and a grain of opium, made into a pill, may be given night and morning, or the calomel may be formed

into a powder with a little ſugar, or mixed with molaſſes, and a draught compoſed of 10 grains of camphor and 30 or 40 drops of laudanum, may be given at bed time, to procure reſt, excite a moderate perſpiration, and to prevent the purgative effects of the calomel. This practice may be continued until a braſſy taſte be felt in the mouth, or the gums become ſlightly ſore, ſpongy and ſwelled; if it be continued after theſe ſymptoms appear, a ſalivation will follow, and very much reduce the patient's ſtrength. If the calomel proves purgative, or produces more than two ſtools a day, its action muſt be checked by giving 10 grains of powdered kino and 5 drops of laudanum, three, four or five times a day, independent of the opiate at night. When the calomel has been continued for a few days, it frequently excites ſevere griping, and teneſmus, or a painful ſtraining or preſſing downwards at ſtool, by which nothing is evacuated but ſlime; this may be remedied by omitting the calomel for a day or two, and taking a moderate doſe of Epſom ſalt or caſtor oil. When the pain continues ſevere, and the fever remains high, notwithſtanding the remedies employed, it becomes neceſſary to affect the ſyſtem with mercury as ſpeedily as poſſible: for this purpoſe a grain of calomel and 5 grains of g. kino may be given every two hours, until the braſſy taſte be felt in the mouth. If the kino does not prevent the purgative effects of the calomel, 5 drops of laudanum may be given and repeated occaſionally.

Nitrous acid has of late been much recommended for the ſame purpoſe as mercury, and it may be tried in this diſeaſe when the uſe of mercury may be improper: thus, when the debility of the patient is very great; when

when the diſeaſe appears at ſea with ſome fear of the ſcurvy appearing alſo, which is always aggravated by mercury; when repeated courſes of mercury have been tried without much effect, the nitrous acid may be very properly employed. A tea-ſpoonful of the acid may be added to a quart of water, ſweetened with ſugar or molaſſes, and drank during the day as common drink. The quantity of the acid may be increaſed to two tea-ſpoonfuls, if the ſtomach can bear it, and its purgative effects may be reſtrained by the uſe of laudanum as before directed. By taking the acid for a ſufficient time the gums become ſore, and a ſpitting is produced if the medicine be longer continued.

Erysipelas or St. Anthony's Fire, is a troubleſome kind of inflammation, very apt to ſpread from one part to another, and repeatedly attacks thoſe who have been once afflicted with it. Although when ſlight, it is rarely productive of ill conſequences, yet when ſevere, or when improperly treated, it is often dangerous. It moſt frequently affects the head, face, neck, arms and legs. When the diſeaſe attacks in a trifling degree, there is merely a redneſs, ſlight ſwelling and ſtiffneſs of the part, with or without an eruption of ſmall clear puſtules, containing a watery liquor. Theſe appearances continue four or five days, then gradually decline, leaving the ſkin rough, cracked and falling off in ſcales. When the complaint is in a more violent degree, eſpecially when it ſeizes the face, the patient is uſually affected with frequent chilly or ſhivering fits, ſickneſs and vomiting; theſe are followed by fever, which is often very violent, attended with ſevere head-ach, and ſome-

times with delirium. At the end of two or three days, a conſiderable degree of redneſs appears; this is frequently firſt ſeen on the noſe or tip of the ear, from whence it ſpreads over the face, head and neck, which are frequently ſwollen to an enormous ſize. The eyelids are frequently puffed up like bladders, and the patient becomes blind. The pain is ſometimes ſevere, but in general there is rather a burning heat with a troubleſome itching, than an acute throbbing pain. The inflamed part appears of a ſmooth ſhining red colour, having ſomewhat of a yellow tinge. This kind of inflammation may be diſtinguiſhed from that which attends a common boil, by preſſing the part with the finger: in Eryſipelas this cauſes the ſkin to appear for a moment of a pale or nearly a white colour, while it has no effect on the former kind. Sometimes in Eryſipelas a great number of ſmall puſtules, or ſpots, may be obſerved, which pour out a thin watery fluid. This diſeaſe is produced by various cauſes, and among others by the abuſe of ſpirituous liquors; by expoſure to a hot ſun; by wounds, eſpecially thoſe of the head; by the bites of inſects, &c.

When the fever runs high, and the head-ach is ſevere, the patient ought to be kept in bed, with his head and ſhoulders raiſed; his feet may be immerſed in warm water, and, if coſtive, a moderate doſe of ſalts may be given, ſo as to produce two or three looſe ſtools, to be repeated occaſionally during the courſe of the complaint. A draught, compoſed of 30 drops of laudanum, and an equal quantity of antimonial wine, may be given at bed time, and the patient may drink plentifully of barley water, rendered pleaſant with lime-juice and ſugar, or of any other light drink. The face may be fomented with

with cloths wrung very dry out of hot water, to which may be added a ſpoonful of vinegar or of ſpirit. All greaſy applications are to be carefully avoided. To abſorb the moiſture which oozes from the puſtules, it has been recommended to duſt them with oatmeal, made warm over the fire.

Somewhat analogous to this complaint is the SHINGLES, which ſpreads round the waſte with great inflammation, heat, tingling and an eruption of watery veſicles. It goes off, however, in ſix or eight days, requiring only reſt, light diet, and ſome cooling phyſic.

INFLAMMATION OF THE EYES is attended with pain, more or leſs acute, redneſs, inability to bear the light, and an increaſed flow of tears. When the inflammation is violent, the patient feels as if a mote were in the eye, or as if a thorn were fixed in it; the eye-lids are ſwoln, the head aches, and there is much fever attending. This complaint is frequently occaſioned by particles of ſand, inſects, &c. blown into the eye; by the ſmoke of burning wood; by expoſing the eye to a cold dry wind, or looking too long at any bright object, eſpecially white-waſhed walls. It is frequently, likewiſe, the puniſhment of drunkenneſs.

To cure this painful diſorder, we muſt endeavour to remove the cauſe: this is particularly neceſſary when ſomething is lodged under the eye-lids. We may attempt to waſh it out with a little warm water, thrown in by means of a ſmall pewter ſyringe, the point of it being gently introduced under the upper eye-lid: or the eye-lids may be turned back, and if a ſmall ſpeck be obſerved on the ball of the eye, it may be removed

by the feather end of a quill, or by a piece of paper cut to a point. When the inflammation continues ſevere, the patient muſt be kept in a dark room, and, if ſtrong, half a dram or 2 ſcruples of jalap may be adminiſtered; but if of a weak habit, it will be ſufficient to give a moderate doſe of ſalts. To abate the head-ache and fever, the feet may be put into warm water; and to moderate the pain, 30 or 40 drops of laudanum, with as much antimonial wine, may be adminiſtered at bed time, and repeated in four or ſix hours, if neceſſary. The eye muſt be kept conſtantly wet with a lotion, compoſed of equal parts of vinegar and water, to half a pint of which may be added a tea-ſpoonful of extract of lead, and two tea-ſpoonfuls of tincture of opium: if this produce pain, the quantity of vinegar may be diminiſhed, or it may be omitted; and if the patient feel uneaſineſs from the coldneſs of the application, it may be made new milk warm, taking care to cover the eye very lightly in every caſe. When the violence of the inflammation has ſomewhat abated, the applications to the eye may be made as cold as is agreeable to the patient. Cold water, or vinegar and water, with the addition of a little ſpirit, will often be found a good waſh. In many inſtances it will give eaſe to touch the ball of the eye with a piece of feather, or with a ſmall camel's hair pencil, dipped in tincture of opium; this gives very acute pain for a moment, but is generally ſucceeded by aſtoniſhing relief; and if the patient receive benefit, it may be repeated two or three times a day, uſing the eye water in the intermediate time. In obſtinate caſes, particularly when attended with much head-ache, a bliſter to the neck, or behind the ears, is often attended with

advantage.

advantage. Shaving the head, and dipping it frequently in cold water, will be found ſerviceable when the complaint is going off, and in perſons liable to frequent returns of the complaint, it will guard againſt a relapſe. A little ſimple ointment, introduced gently between the eye-lids, will prevent their adhering together during the night and occaſioning pain.

Inflammation of the inner part of the Ear may be produced by cold, or other cauſes: it is attended with an acute, ſhooting, and throbbing pain in the ear, accompanied with ſevere head-ache, and a feveriſh ſtate of the ſkin. To relieve this complaint, 40 or 50 drops of tincture of opium, and as much antimonial wine may be given in a draught, and a bliſter applied under the ear. Cloths wrung very dry out of water as hot as the hand can bear, may be applied over the ear, and repeated every hour for ten or fifteen minutes, to relieve the violence of the pain. A briſk purge may be given five or ſix hours after the opiate, and the patient ſhould avoid every thing which is ſtimulating or heating. If an abſceſs have formed, it will be proper, when it breaks, to promote the diſcharge of matter by frequently dropping into the ear a little warm water; and to prevent the acceſs of air, as well as to guard againſt inſects, a little cotton or wool, dipped in oil, may be put into the ear.

In ſome perſons an Inflammatory Sore Throat is the immediate conſequence of expoſure to cold. When the complaint is violent, there is generally great heat of the ſkin, much thirſt and reſtleſsneſs. The

throat appears almoſt cloſed from the ſwelling of the ſurrounding parts, and on attempting to ſwallow, there is an acute pain which frequently ſhoots through the ears. The diſorder may often be checked by taking an emetic as ſoon as ſoreneſs or ſtiffneſs is felt in the throat. The bowels muſt be opened by a briſk purge of ſalts, and a piece of flannel moiſtened with ſpirit of hartſhorn, or with an equal portion of hartſhorn and oil, may be applied outwardly to the throat. The throat may be gargled with a mixture of vinegar, or lime juice and water; or if the ſwelling increaſe, a bliſter may be applied acroſs the throat. A gargle, compoſed of vinegar, in which cayenne or bird pepper has been infuſed, and mixed with a ſufficient quantity of water, is often uſeful in checking ſore throat when employed early.

Young perſons of a robuſt habit are frequently affected with BLEEDING FROM THE NOSE; when this occurs after uſing much exerciſe, or after a debauch, eſpecially if preceded by or accompanied with much head-ache, throbbing of the temples, and heat or flushing of the face, the blood may be permitted to flow for ſome time. The ſame plan may be obſerved when the bleeding ariſes from external injury, eſpecially from a blow upon the head. But when the diſcharge has returned ſo frequently as to weaken the patient, or when ſuch a quantity of blood has been loſt at once, as to produce faintneſs, paleneſs of the lips and face, and coldneſs of the limbs, it then becomes very ſerious, and danger is to be apprehended. The patient ought to be placed in a cool ſituation, with his head and ſhoulders raiſed, and his ſhirt opened at the neck. His hands ought to be dipped

dipped in very cold water, or when there appears to be much danger, the whole body, eſpecially the face, neck, and breaſt, ſhould be daſhed with cold water. If the patient become ſick and faint, the bleeding generally ceaſes; therefore neither wine, nor ſpirits, nor any kind of warm liquor is to be given to rouſe the patient; becauſe it will bring back the bleeding with redoubled violence. Every thing the patient takes ſhould be cold. Sometimes preſſing the noſtrils for a length of time will often ſtop the bleeding; or vinegar and cold water may be ſnuffed up the noſe with advantage. When the blood flows with violence, plugs of cotton or of lint, dipped in a ſolution of a dram of ſugar of lead in two table-ſpoonfuls of water, and an equal quantity of vinegar, may be introduced up each noſtril, and retained there for forty-eight hours, or until they come out of themſelves; and during this time the patient muſt be particularly cautious neither to blow his noſe nor to pick it. If the body be coſtive, and the patient of a weak habit, or rendered ſo by loſs of blood, a gentle doſe of ſalts may be taken; if robuſt and full of blood, half a dram, or two ſcruples of jalap may be given. Should the bleeding recur frequently, in addition to the above-mentioned to be uſed during the flux of blood, 20 or 30 drops of elixir vitriol may be taken in water three or four times a day; cooling acid fruits may be indulged in, and the diet ſhould be light and temperate. When the debility is very great, it will be proper to take half a dram of bark, or more, three or four times a day. When bleeding at the noſe occurs in Scurvy, it is very dangerous, and requires in addition the remedies above-mentioned, together with thoſe noticed under the article Scurvy.

Scurvy. Ruſpini's Styptic put on lint, or cotton, is efficacious in ſtopping a bleeding from the noſe: it is likewiſe a good gargle in ſcorbutic hæmorrhagy from the tongue, gums, or inſide of the cheeks: ſhould any of the liquor be ſwallowed, it will not be injurious to the ſtomach.

Expoſure to the night air, or to a current of air, when in a ſtate of perſpiration, wet clothes, &c. frequently excite troubleſome COLDS, accompanied with cough, hoarſeneſs, ſneezing, and watery eyes, which often continue for ſeveral days. The cure is in general very ſimple. The patient ought not to be heated by warm drinks, nor by too cloſe confinement; it will be ſufficient for him to avoid expoſure to the cold, and to remain in a temperature agreeable to his own feelings. To abate the cough, and to procure a gentle moiſture on the ſkin, 20 or 25 drops of laudanum may be taken at bed time, with a tea-ſpoonful of ſpirit of nitre, or antimonial wine, as already directed. To remove the uneaſy tickling ſenſation in the throat, which excites cough, an emulſion compoſed of an ounce meaſure of oil (or two table ſpoonfuls) four ounce meaſure of water, and 30 drops of ſpirit of hartſhorn, well ſhaken in a bottle, may be given by ſpoonfuls occaſionally; or the patient may take honey or moiſt ſugar, mixed with a ſufficient quantity of lime-juice or vinegar, to render it agreeably acid. If pain be felt in the cheſt, or if the hoarſeneſs be obſtinate, a bliſter applied to the breaſt will often afford relief; the bowels ſhould alſo be kept open.

Coughs and Hoarseness are by no means uncommon complaints in a hot climate. When the cough is troubleſome at night, 20 or 25 drops of laudanum may be taken at bed-time. A little honey rendered agreeably acid by lime-juice may be taken occaſionally to remove the hoarſeneſs and tickling in the throat. Or a little ſweet oil mixed with the yolk of an egg and a ſufficient quantity of lime juice and ſugar to render it agreeable. In caſe of a ſore throat, a gargle of vinegar may be uſed frequently, or of lime juice and water.

Notwithſtanding the heat between the tropics, Rheumatic Pains often affect the limbs, particularly at the joints, and are moſt ſevere when the patient is warm in bed. There is a ſenſe of numbneſs in the parts affected, and a degree of coldneſs, as if cold water was running down them. The rheumatiſm is moſt frequent during the rainy ſeaſon, or when the air is very moiſt, and liable to ſudden changes. It uſually ariſes from expoſure to the night air in thin cloathing. When the pains affect the breaſt they are often removed by wearing a flannel ſhirt or waiſtcoat next the ſkin, and alſo by putting on cotton, or flannel ſocks, to keep the feet warm and dry. The pains, at their very commencement, may often be removed by wearing a warmer dreſs, and producing a gentle ſweat. A tea-ſpoonful of ſpirit of nitre, and nearly the ſame quantity of antimonial wine, with 30 drops of laudanum taken at bed-time, will in general have the deſired effect. Or inſtead of the antimonial wine, 5 grains of camphor may be diſſolved in a tea-ſpoonful of ſpirit of nitre, and added to the 30 drops of laudanum. When the pain is ſevere in one limb

limb or joint, the part may be rubbed with a mixture of equal quantities of oil and hartſhorn, or of hartſhorn and ſpirits of wine with camphor, and afterwards covered with flannel.

When the pains have been long fixed in a part, the above mentioned plan does not always relieve them: but the following mode of practice proves moſtly ſucceſsful. Two grains of opium, with 2 grains of calomel, are to be taken every night at bed-time, and continued till the pain is eaſier, or till a diſagreeable braſſy taſte is felt in the mouth, together with a ſlight degree of ſoreneſs. If the pills be continued beyond this period, they may bring on a ſalivation. Should the pains notwithſtanding this courſe be ſtill troubleſome, the pills, after a proper interval, may be repeated in the ſame manner till a ſlight ſoreneſs of the mouth is brought on a ſecond time: this method has often cured the complaint, when bliſters and other remedies have been employed without effect.

Case of Rheumatic Pains. T. G. has been about two years on the coaſt of Africa.

Monday. Has been affected for a week paſt with very ſevere pains in the joints of his wriſts, arms, knees, &c. which appear to be ſlightly ſwelled: he feels alſo ſevere pains in the forehead over the eyes, and a pain ſtretching acroſs his breaſt. His ſkin is hot and dry; he is very reſtleſs, and complains of much thirſt. To take 5 grains of camphor diſſolved in a little ſpirit, to which a table-ſpoonful of water is afterwards to be added, and 15 drops of laudanum. This draught to be repeated in three or four hours. To have tea, lemonade, or burnt biſcuit and water for common drink.

Tuesday.—He ſweated very profuſely all the night: the

the pain in his head is gone: his ſkin is cool and moiſt: his thirſt, and reſtleſſneſs are greatly abated. The pains in his limbs continue as ſevere as before, and he is unable to move. To take 2 grains of calomel and 2 of opium every night at bed-time; and a cupful of bitters three times a day.

THURSDAY.—The pains are ſomething eaſier, and he can uſe his joints a little; he has reſted much better at nights than before; feels no diſagreeable taſte in his mouth. To continue the pill with opium and calomel; and the bitters as before.

SATURDAY.—The pains of his joints are conſiderably relieved, and he can attend a little to his work. His arms and wriſts are free from pain, but his ancles are ſtill painful and ſwelled. He feels no particular taſte in his mouth: nor are his gums in the leaſt ſore. The pills and bitters are to be continued.

MONDAY.—He feels this morning an unpleaſant taſte in his mouth, as if from braſs or copper; his teeth are rather looſe; and his gums hot and ſlightly ſwelled. He complains only of general weakneſs. The pains and ſwelling are intirely gone, and his appetite is beginning to return. He is to omit the calomel, but to continue the bitters a week longer; and if his mouth becomes ſorer, he is to take a gentle doſe of ſalts.

This man was very ſoon reſtored to health, and followed his uſual work for three months without feeling the ſmalleſt return of the pain. At the end of that time, by getting drunk and expoſing himſelf to the night air, he had a very ſevere return of pain and ſtiffneſs in his joints, without much ſwelling. The calomel and opium were given to him again as formerly; and

he

he ſoon recovered. He continued the bitters for a week after the pains left him; and had no return of them for a year afterwards.

Colic Pains are frequently occaſioned by taking ſomething which diſagrees with the ſtomach. The pain is ſevere, and is chiefly felt round the navel, though ſometimes it moves from one part of the belly to another. If it abates for a few minutes, it returns only with greater violence. Coſtiveneſs is generally a ſymptom of the cholic: it is alſo ſometimes attended with vomiting, at other times with an oppreſſive ſickneſs only, or a ſenſation of a load at the ſtomach. When the ſtomach is thus oppreſſed, or has received ſomething offenſive, a vomit muſt be given immediately; and after its operation ſome laxative, as caſtor oil, if it can be retained: if not, let an ounce of Epſom ſalt be diſſolved in a pint of water, and a cupful of it be taken every half hour till it operates. Should the ſtomach bear no liquid, three or four of the purging pills may be given, and repeated, if neceſſary, in two or three hours. If all internal medicines fail of the intended purpoſe, we muſt have recourſe to clyſters; which may be compoſed of two ounces of Epſom ſalt diſſolved in three gills of common warm water, or of ſea water. This may be conveyed to the bowels by the uſual means of a pipe and bladder, or be injected by a ſyringe. If it ſhould return without producing a ſtool, the ſame application ſhould be repeated in an hour. When the pain is extremely ſevere in cholic, the patient may ſit for ten minutes in hot water, and afterwards take 30 or 40 drops of laudanum, which often yields immediate relief, though not

not of long duration, unleſs the patient has a ſtool: the purging medicines and clyſters muſt therefore be ſtill continued. On the whole, clyſters are perhaps the moſt effectual means of relieving the pain and obſtruction of the bowels: they may be repeated every hour till the effect is produced. In caſes of habitual coſtiveneſs, where the patient is tired of taking purgatives inwardly, he may obtain an equal advantage from clyſters. Syringes are made for the purpoſe with a long tube, ſo that the patient can with little trouble relieve himſelf.

The Dry Belly-Ache is a diſeaſe not more to be dreaded from the excruciating pain which attends it, than from its frequent termination in palſy. It often occurs in the Weſt Indies, and has been attributed by many to the drinking of new rum, in which particles of lead were diſſolved. Houſe-painters, and thoſe employed in white-lead works, plumbers and glaziers, are very liable to it alſo in Europe. It is ſometimes occaſioned by drinking cyder, or ſpoiled and ſour wines, which have been adulterated with lead, to give them a ſweetiſh taſte.

The patient frequently complains for a day or two before he is attacked with pain, of a ſenſation of weight in his belly: this is followed by a ſevere fixed pain in the bowels, not increaſed, but rather diminiſhed by preſſure on the part; and the navel appears drawn in towards the back-bone. An obſtinate coſtiveneſs attends this complaint, and there is ſometimes a frequent but fruitleſs deſire of going to ſtool. There is frequently vomiting and fainting, and the countenance appears of a dirty yellow. When the ſeverity of the pain in the bowels

bowels abates, and pains are felt in the joints of the knees, feet, arms, &c. they may be conſidered as fore-runners of palſy. Perſons who have already ſuffered from this diſorder are liable to returns of it from cold; they ought, therefore, to guard cautiouſly againſt ſudden changes of the atmoſphere, by wearing flannel and preſerving their feet dry and warm. The principal object towards a cure, conſiſts in attention to procure a free evacuation by ſtool. Ten grains of calomel may be given at firſt, and two hours afterwards one or two table ſpoonfuls of caſtor oil may be given, or the ſolution of Epſom ſalts as before directed. The oil may be repeated every hour, or every two hours, until the effect be produced. If the ſtomach be ſo much affected with ſickneſs as to reject the medicine, 30 or 40 drops of laudanum ought to be firſt given, and in the ſpace of an hour or two, purgatives may be employed. It will frequently afford more relief, both for the pain and ſickneſs, to adminiſter 60 or 80 drops of laudanum, in a pint of warm water or gruel, as a clyſter, than to give it by the mouth. When, notwithſtanding the continued uſe of purgatives, ſtools are not procured, a clyſter compoſed of 2 ounces of Epſom ſalts, diſſolved in a ſufficient quantity of water, may be injected every two hours. It will tend greatly to relieve the pain if the patient ſit for fifteen or twenty minutes in warm water, and afterwards have his belly rubbed with a dram of camphor diſſolved in a table-ſpoonful of oil, to which has been added a tea-ſpoonful of laudanum. When ſtools have been procured, great care muſt be taken to prevent the return of coſtiveneſs, and the patient ought to take for a few

a few days afterwards an infusion of gentian, or 15 or 20 grains of powder of Colombo twice a day.

The PILES constitute a very troublesome and painful disease, too well known to require a description. It is usually brought on by a costive state of the bowels; and as the motion of a ship has a great tendency to produce costiveness, sailors are very liable to be affected with this disease. In some cases, blood is discharged in considerable quantities; in others there is no discharge; but a number of small, hard tubercles, or knots, exquisitely painful, are felt round the fundament. As the disease is in general prevented, or relieved by keeping the bowels gently open, a table-spoonful of castor oil may be taken every two hours until it has the proper effect, or a solution of the Epsom salt, as formerly directed. The purging pills and calomel are not so suitable for this disease. The purgative must be repeated every second or third day until the disease be removed; and if the pain be great, an opiate may be given at bed time. Cloths dipped in cold Goulard water will be useful: or a liniment composed of a tea spoonful of extract of lead, with the same quantity of laudanum, and a table spoonful of sweet oil, may be applied three or four times a day.

If persons afflicted with the piles would wash the fundament with very cold water after every evacuation, they would find the practice very beneficial.

RUPTURE.—No class of people is more liable to that kind of accident called Rupture, than sailors. A rupture is a soft tumour or swelling, occasioned by a portion of

of the bowels being puſhed out at ſome weak part of the belly. Ruptures may occur at the navel, or the upper and inner part of the thigh; but in men they moſt frequently appear at the groin, where the cord going to the teſticle paſſes out of the belly. This complaint in general comes on ſuddenly, and ſoon after ſome violent exertion, ſuch as pulling at a rope, ſtraining to lift heavy weights, &c. when a tumour or ſwelling ſometimes not ſo large as a walnut, is felt in the groin. This is attended with an exquiſitely acute pain in the part: the ſtomach is affected with ſickneſs and vomiting, and the bowels ſeem to the unhappy ſufferer as if twiſted, hence the complaint is frequently miſtaken for the colic. If the patient does not attend to the firſt appearance of the complaint, and get the bowels replaced, the pain is aggravated to a moſt excruciating degree; the vomiting increaſes, and every thing taken into the ſtomach is inſtantly rejected. The belly becomes ſo exquiſitely tender as not to bear the ſlighteſt touch. The ſkin is covered with a cold, clammy ſweat: the hands and feet turn cold. After ſome time the pain ſuddenly abates; hiccough comes on, and in a very few hours death cloſes the ſcene. Although the tumour appear firſt in the groin, yet it gradually deſcends lower, until it reach the bottom of the ſcrotum, which, when of long continuance, it diſtends to an enormous ſize.

A rupture may be diſtinguiſhed by being in general a ſoft ſwelling, attended with pain, and appearing ſuddenly after ſome exertion; by its returning into the belly (if not ſtrangulated) when the patient lies upon his back and preſſes upon it; by its increaſing in ſize, and preſſing againſt the hand applied to it, when the patient coughs

coughs or retains his breath, and preſſes downwards as at ſtool. As ſoon as this accident happens, the perſon muſt inſtantly lay aſide every kind of exertion; he muſt lie down upon his back with his head lower than his body, with his thighs bent, and his heels brought up cloſe to his buttocks, and endeavour by preſſure to make the tumour return into the belly. For this purpoſe the preſſure muſt be made with the flat hand applied with ſome degree of force, but not ſo great as to occaſion much pain. When this is not ſufficient, the patient may be ſuſpended from the back of a ſtrong man, having his legs thrown over the ſhoulders of the latter, and in this ſituation with his head hanging downwards, the attempts to preſs back the tumour may be repeated. If this mode likewiſe fail, cloths dipt in very cold water, or in vinegar and water, or in ſaltpetre or common ſalt diſſolved in water, may be applied to the tumour for the ſpace of an hour or two, and renewed every two minutes, or before they loſe their coldneſs. At the ſame time a quart of cold water may be given as a clyſter in the manner above directed (ſee page 75) and if, as is generally the caſe, the patient be coſtive, two ounces of Epſom ſalt may be diſſolved in it. When by theſe means he is ſo fortunate as to make the fallen portion of bowels return into the belly, he muſt carefully guard againſt a relapſe. This might be produced by the ſmalleſt exertion, even by ſtanding upright, by turning in bed, or by ſtraining at ſtool, unleſs the part be guarded by the application of the flat hand. Coſtiveneſs muſt be prevented by the uſe of the purging pills already mentioned, or by caſtor oil, or Epſom ſalt. No perſon who has had this complaint, even in the ſlighteſt degree, ought to conſider himſelf

himſelf for a moment ſecure from a return of it, perhaps a fatal return, unleſs he provide himſelf with a proper elaſtic truſs, which muſt be conſtantly worn.

Complaints of the URINARY PASSAGES occur more rarely in hot than in cold climates. The kidneys may be inflamed by a variety of cauſes; by violent exerciſe, falls, blows, by ſtones or gravel forming there, &c. The diſeaſe is diſtinguiſhed by a fixed, burning, or throbbing pain in the loins, immediately under the loweſt ribs; on one or both ſides, the pain frequently ſhoots down to one or both teſticles, which are painfully drawn up towards the body. A ſevere pain is alſo felt in the hip of the affected ſide, running down the thigh, which feels as if benumbed. The patient finds the pain much increaſed by attempting to walk or to ſtand erect: and feels more eaſe by lying on the affected than on the ſound ſide. The urine is voided with great difficulty, ſometimes only in drops, and is generally high coloured. When the diſeaſe is violent, there is commonly much fever, ſickneſs, and vomiting. It will be neceſſary to give opium to abate the ſeverity of the pain: 40 drops of laudanum, with an equal quantity of antimonial wine, may be taken, and repeated in three or four hours, if relief be not obtained. The patient may be placed for half an hour in a bath of warm water, and when he comes out and is rubbed dry, a clyſter, compoſed of 60 drops of laudanum, mixed in a pint of warm water and oil, may be injected, and repeated in a few hours if neceſſary. A mixture of hartſhorn and oil, or a dram of camphor in a ſpoonful of oil, may be rubbed frequently over the pained part. Bliſters muſt be avoided in this complaint.

complaint. The patient may drink plentifully of tea, gruel, rice, or barley water, or gum arabic diſſolved in water. When a ſtone is paſſing from the kidneys to the bladder, nearly the ſame train of ſymptoms occurs, and the ſame mode of practice will be found uſeful.

When there is a STONE in the BLADDER, the patient feels a painful itching at the end of the yard: the urine depoſits a mucous ſediment, is voided with exceſſive pain, and frequently ſtops ſuddenly whilſt paſſing in a full ſtream. The deſire of making water is alſo accompanied with a ſudden and irreſiſtible motion to evacuate the bowels. The ſufferings of the patient may be diminiſhed by ſitting in the warm bath, by taking occaſionally 40 or 50 drops of laudanum internally, or having it injected in a clyſter as above directed. Perſons going from Europe to a tropical country, have experienced a diminution, and even an entire ſuſpenſion of pain. With a view to diſſolve the ſtone, ſoap has been recommended in the form of pills. Some prefer lime water, made by pouring boiling water upon ſhells well burnt in the fire, and decanting the clear liquor, of which a pint may be taken daily. Others give 15 or 20 grains of ſalt of tartar, diſſolved in a ſufficient quantity of water, two or three times a day: 20 drops of acid of vitriol, in water, may be taken immediately afterwards, with much advantage; ſee page 20.

STRANGURY, or a conſtant, painful, and ineffectual deſire of making water, may be removed by the warm bath; by drinking plentifully of gum arabic diſſolved in water, or of rice or barley water; by laudanum given

in a clyſter; or if the body be coſtive, by a doſe of Epſom ſalts. Inability to retain the urine is ſometimes relieved by ſtrengthening the ſyſtem, by taking bark or bitters; by the cold bath; or by applying a bliſter to the ſacrum. Perſons affected with ſtrictures of the urethra, ought to be conſtantly provided with bougies, and to be inſtructed by a ſurgeon in the mode of introducing them.

A ſailor, though on the eve of undertaking a long and diſtant voyage, not unfrequently expoſes himſelf to venereal infection, and feels the deſtructive effects of it when medical aſſiſtance cannot be procured. This circumſtance has induced the author to inſert a few ſhort directions for the treatment of venereal complaints; at the ſame time he earneſtly requeſts, that no perſon who values his health, or peace of mind, will make uſe of them without the greateſt caution, and that he will never truſt to himſelf in ſituations where the advice of a regular practitioner can be obtained.

Gonorrhoea, or Clap, is the moſt frequent form of this diſeaſe. It is known by a redneſs and ſlight ſwelling at the extremity of the urethra, or canal through which the urine paſſes. The urine, when voided, excites an acute ſcalding pain, which is particularly ſevere when the laſt drops are forced away; and there is alſo a greater or leſs diſcharge of whitiſh or greeniſh coloured matter, from the urethra. For the cure of this complaint, the patient muſt refrain from fermented liquors, ſpices, animal food, and every thing heating. A large quantity of watery drink may be taken, ſuch as tea, coffee, gruel, barley or rice water, &c. in order to dilute the urine and render it leſs ſtimulating: 15 or 20 grains

of

of cream of tartar, diſſolved in a cup of water, may be taken three or four times a day, or a tea-ſpoonful of gum arabic, diſſolved in a ſufficient quantity of pure water, or rice or barley water, may be drunk four or five times a day, or oftener, if the ſcalding of the urine be very violent. The part affected may be immerſed, for 5 or 10 minutes, in warm water, ſeveral times a day. If there be much pain, 30 drops of laudanum, or more, may be taken at bed time. Beſides the above, an injection may be uſed, compoſed of 15 or 20 grains of ſugar of lead, diſſolved in a gill of water, and uſed luke-warm. The quantity of ſugar of lead may be increaſed every three or four days, 5 grains, provided it gives no pain, until it amounts to 40 grains, in the ſame quantity of water. The injection muſt be thrown up the urethra, very gently, by means of a ſmall pewter ſyringe, capable of holding about a table-ſpoonful of liquid, and having a conical point; and it muſt be retained there two or three minutes. The injection may be uſed half a dozen times, or oftener, in a day, and immediately after making water. Great care ſhould be taken to avoid exciting pain.

When the diſeaſe is very violent, the patient is frequently troubled with painful erections, in which the penis is forcibly bent downwards or to one ſide. This affection is called chordee. It may be relieved by taking 30 or 40 drops of laudanum at bed time, with 10 grains of camphor, diſſolved as directed page 136—7.

Perſons affected with Gonorrhœa are ſometimes ſeized with pain in the ſide of the belly, loins and hips. One or both teſticles ſometimes ſwell conſiderably, become extremely hard, and exquiſitely painful. The running

either diminiſhes or ceaſes entirely. There is frequently nauſea or ſickneſs, and a conſiderable degree of fever. As ſoon as theſe ſymptoms diſappear, the patient ought to ſuſpend the parts by means of a ſmall bag, or a thin handkerchief tied round the waiſt; or what is more adviſeable, he ought to confine himſelf to bed, and lie upon his back. A doſe of ſalts may be taken if the body be coſtive, and after its operation, if there be much pain, 30 or 40 drops of laudanum will afford relief. Cloths, four times doubled, and dipped in a mixture of equal parts of vinegar and water, are to be applied cold to the ſwelling, to be taken off before they become warm, then to be applied as before. To a quart of the above mixture, one or two drams of ſugar of lead may be added, and employed in like manner. The diet ſhould be light, and if the patient has previouſly uſed injections, they muſt now be laid aſide, until the ſwelling ſubſide.

Small ulcers, called Chancres, frequently appear upon the extremity of the yard. Theſe at firſt reſemble ſmall itchy puſtules, not larger than a pin's head, and contain a clear fluid. When the puſtule breaks, a ſmall ulcer is formed, the edges of which are hard, generally inflamed, more or leſs painful, and its ſurface is covered with a whitiſh ſlough or ſkin. Theſe ulcers become gradually deeper, and ſometimes ſpread very rapidly over the ſurrounding parts: their progreſs can only be arreſted by a proper application of mercury When they are not very painful, a little red precipitate may be ſprinkled upon them, and repeated once or twice at the diſtance of twenty-four hours, until the ſurfaces look clean and red. They may then be dreſſed with ſome ſtrong mercurial ointment,

ointment, ſpread on lint, or covered with lint dipped in a ſolution of ſugar of lead, and frequently wetted: or they may be ſlightly touched with lint, dipped in a ſolution of blue vitriol (ſee page 139.) If, however, theſe applications produce pain, they muſt be laid aſide, and the chancres muſt be kept very clean by frequently waſhing with warm water, or a warm ſolution of ſugar of lead. Mercury muſt be employed early, and its uſe ſhould be ſteadily continued for five or ſix weeks after the ulcers are healed. Thus one grain of calomel, made into a pill, may be taken night and morning, and continued until the mouth become ſlightly ſore, when it may be omitted for a day or two. As ſoon as the ſoreneſs of the mouth abates, the mercury muſt be reſumed, and repeated in ſuch a manner as to keep the gums tender during the whole of the cure. If the mercury prove purgative, its influence upon the diſeaſe will be leſſened: that effect muſt therefore be prevented by opium and kino, as directed page 78. The diet ſhould be nouriſhing. When the ſmall ulcers have been healed by mercury not taken in a ſufficient quantity, the throat ſoon after becomes ulcerated, and violent pains are felt in the forehead, ſhin bones, &c. which are aggravated by the warmth of bed. Copper-coloured ſpots break out upon the face, about the roots of the hair, and over the whole body. Theſe ſymptoms ſhew that the conſtitution is deeply affected, and that the courſe of mercury has not been long enough continued.

A ſwelling in the groin, called Bubo, is not an unfrequent occurrence. When a degree of ſtiffneſs, or pain, is perceived in the groin, bubo may be ſuſpected;

the patient ought then to avoid exercise, to use a low diet, to take a moderate dose of salts every third or fourth morning, and to rub the part very gently with equal parts of oil and hartshorn. Should an abcess form in the part, it must be allowed to burst of itself. If the discharge be small, and there be much inflammation and pain around it, a common poultice may be applied warm two or three times a day, after which it may be dressed with an ointment composed of 1 ounce of digestive, in which 1 dram of red precipitate is mixed. The internal use of mercury must also be continued, as before directed. When the prepuce, or foreskin, inflames, and swells so much that it cannot be drawn back, the affection is called Phymosis. This is generally occasioned by chancres beneath. Under these circumstances, the patient should confine himself to bed, and use in general the means recommended in swelled testicle. Cloths dipped in the solution, must be applied cold, and carefully renewed. A little warm water, or a little of Goulard's water, made warm, may be injected very gently, three or four times a day, under the prepuce. When the fore-skin has been drawn back, and swells so much that it cannot be drawn forwards again, it constitutes Paraphymosis, and must be treated with cold applications, low diet, purging, &c. as in the last complaint.

The Craw-craws, as it is called, is a kind of itch, with which the natives of Africa are much affected: it may always be cured by flower of sulphur mixed with butter; or by oil thickened with a little wax melted in it, to which may be added a little soft soap. These ointments

ointments are to be rubbed on the ſpots, night and morning, as long as any of them are viſible.

Small-Pox.——The Small-Pox is a diſeaſe to which all people are liable once in their lives; and when introduced by contagion among thoſe who have not had it, proves as dreadful and as deſtructive as the plague. This diſeaſe ſometimes breaks out on ſhip-board, eſpecially where there are a number of paſſengers: it therefore becomes neceſſary to give a ſhort account of its ſymptoms and mode of treatment, together with ſome cautions reſpecting the manner of putting a ſtop to its ravages; both with a view to its cure on its firſt appearance, and to prevent its ſpreading in countries where the ſhip may touch, and perhaps cauſing the death of thouſands.

This diſeaſe, like all other feveriſh complaints, begins with coldneſs and ſhivering, followed by great heat, except of the hands and feet, which are generally cold; thirſt, and general uneaſineſs. There is much pain in the head, and over the whole body, particularly in the back and loins; there is alſo an uneaſineſs or pain at ſtomach, with ſickneſs and vomiting. On the third or fourth day from the attack, ſmall red ſpots, not unlike flea bites, break out, firſt on the face, then on the neck and breaſt, from whence they ſpread over the whole body. Theſe ſpots gradually grow larger, until the ſeventh or eighth day, when they are nearly as large as peas, and are filled with a yellowiſh matter. About the eleventh day they appear rough at top, and begin to fall off in ſcales, leaving pits or depreſſions. During the time the ſmall-pox are encreaſing in ſize, the face

ſwells, and when the puſtules are very numerous, the patient becomes blind, and ſlavers or ſpits very copiouſly. After continuing a few days, the ſwelling of the face ſubſides, and is followed by a ſimilar ſwelling of the hands, and then of the feet. When the Small-Pox are not ſo numerous as to touch each other, when each puſtule is ſurrounded with a roſe-coloured circle, and when the fever abates after the eruption appears, a favorable termination may be expected. On the contrary, when the ſpots are confluent, or run together, particularly on the face; when they appear flat and pale; when the fever does not abate after the eruption, but rather increaſes, and is attended with delirium, there is much danger.

In treating this complaint, we ought to conſult the patient's feelings. If he be able to move about, he ſhould not be confined to bed, but be allowed to walk, and expoſe himſelf freely to the cool air: if obliged to remain in bed, he muſt be lightly covered, and muſt be kept cool in proportion to the ſeverity of the fever. If the ſtomach be affected with much ſickneſs, and a ſenſe of weight, an emetic of ipecacuanha, or of tartar emetic, may be given, and the purging mixture, as ordered page 90, ſhould be taken afterwards, if coſtive, and repeated occaſionally, to keep the bowels open at leaſt twice a day. For the ſame purpoſe, ripe fruits and cold acid drinks may be freely taken; and if the patient be uneaſy and reſtleſs, an opiate, of 30 drops of laudanum, may be given at night. Should the throat be ſore, and the patient incommoded with much ſaliva or phlegm in the fauces, an acid gargle (ſee page 86,) may be frequently uſed. If on the eighth day the Small-

Small-Pox continue flat, attended with violent fever, delirium, &c. it will be proper to give the bark, with acids, and to treat the diſeaſe in the ſame manner as recommended in the remittent fever. Cleanlineſs, and a free circulation of cool air, are particularly deſirable in this diſeaſe. The patient's linen muſt be frequently changed, and his body waſhed with cold water, or with vinegar and water. The diet ſhould conſiſt of vegetable ſubſtances, ſuch as have been already recommended in fever, &c.

As the Small-Pox is always produced by infection, and does not ariſe from the ſtate of the air, it may be prevented from ſpreading, by uſing proper precautions. Even ſhould the diſeaſe break out on board a veſſel at ſea, where there are perſons who have not had it, if all communication be cut off between them and the infected, the diſeaſe may be ſtopped, as has been experienced even in the plague. The perſon who waits upon the patient ſhould always be conſidered as infected, and of courſe avoided by the crew, as well by thoſe who have had the diſeaſe, as by thoſe who have not; becauſe the uſual mode of conveying the diſorder is by the clothes of the ſick perſon, or of thoſe who have viſited or attended upon him. When the patient changes his linen, it ought to be immediately ſteeped in vinegar and water, or, which is ſafeſt, burnt; and no offenſive matters ſhould be retained for a moment in the room. When the patient has recovered, and his ſkin has become nearly ſmooth, he ſhould not be allowed to join the crew until he be cloſely ſhaved, and waſhed with vinegar from head to foot. The birth occupied

by the patient, which has probably been formed only by a partition of painted canvas, ought, during his ſickneſs, to be frequently ſprinkled with vinegar, or fumigated by burning tobacco, pitch or tar, gunpowder, &c. or what will be found infinitely preferable, the nitrous acid vapour,* as mentioned below.

It may be of uſe to know that in all infectious diſeaſes, the infection ceaſes to act at a very ſmall diſtance from the patient, unleſs aſſiſted by a current of air. Perſons ſhould therefore avoid ſtanding to leeward of the ſick, and be eſpecially careful to avoid their breath, at the ſame time touching them as little as poſſible. To theſe precautions neceſſary for the preſervation of health, and which are applicable to all infectious diſeaſes, muſt neceſſarily be added ſtrict temperance, cleanlineſs, and a free circulation of air. The advantage of this laſt will be evident when we reflect, that if a number of men in the moſt perfect health be crowded together, without

* In all infectious diſeaſes, ſuch as fever, flux, ſmall-pox, plague, &c. the following mode of fumigation, recommended by Dr. C. Smyth, will be found of great advantage in deſtroying the contagion, and may very eaſily be put in practice. Thus, in an iron pot filled with heated ſand, place a glaſs or china ſaucer, or cup, and into it put one or two table-ſpoonfuls of vitriolic acid, to which muſt be added, from time to time, ſome nitre, i. e. ſalt-petre. Copious vapours will thus be emitted, which muſt be made to pervade every part of the birth. Two or three ſuch veſſels may be employed, and placed in different parts of the room, under the bed, &c. the mixture being frequently ſtirred with a piece of glaſs, until the vapours ceaſe to riſe. This proceſs may be repeated ſeveral times a day.

procuring

procuring a change of air by free ventilation, an infectious and alarming fever will inevitably be produced.

When the Small-Pox breaks out on ſhore, it may, by proper care, be eaſily prevented from ſpreading. The patient ſhould be removed to a ſmall diſtance, and placed in a houſe appropriated to the purpoſe, with proper attendants, who muſt have no communication with thoſe in health. As ſoon as any one liable to the Small-Pox falls ſick, he muſt be removed to the receiving houſe as ſoon as the nature of the diſeaſe is evident, at leaſt as ſoon as the eruption ſhews itſelf; though there are inſtances of perſons remaining until the fourth day of the eruption, without communicating the contagion, but this muſt always be attended with danger. As woollen cloths are much more liable to retain infection than linen, where it can be done with propriety, they ought always to be burnt. When this cannot be complied with, they muſt be ſubjected to the regulations of a ſtrict quarantine. They, together with all kinds of goods capable of retaining infection, ſhould be expoſed for a conſiderable time to a current of air, not laid in heaps, but ſo placed that each article may be ſeparately expoſed. The heat of an oven will be found effectual, where it can be uſed, or the vapour of burning brimſtone.

Inoculation. When the Small-Pox has been introduced at ſuch a number of points that its progreſs cannot be checked by theſe precautions, we ſtill have another means in our power to oppoſe it, viz. Inoculation, by which we produce a milder and much ſafer diſeaſe. This operation, which is extremely ſimple, may be performed at any time before a perſon actually falls

ſick, even though the diſeaſe ſhould chance to break out in the ſame family. The natural infection, and that by inoculation have no effect upon each other; thus, if a perſon inoculated ſhould have already received the infection, the Small-Pox will run its courſe as if the patient had not been inoculated. No further preparation is requiſite than to leave off the uſe of animal food, to avoid every thing heating; and to take ripe fruits and acid drinks freely. A ſmall ſcratch is to be made on the inſide of one or both arms, above the elbow, with the point of a lancet or a needle, ſo as ſcarcely to draw blood; and upon this ſcratch muſt be applied a little matter taken on the lancet or needle point, from a Small-Pox puſtule, between the fifth and eighth day of the eruption. No plaiſter or covering is required, but the ſcratches may be expoſed to the air till dry. About the third day the ſcratch appears red and ſlightly inflamed; this is much increaſed on the fifth and ſixth day, when the patient complains of a ſmarting pain in the ſpot, and ſome uneaſineſs under his arm. About the eighth day, the patient feels indiſpoſed, and ſomewhat drowſy; he is affected with chilline ſs, ſucceeded by heat, pain in the head and loins, ſickneſs and vomiting, as in the natural Small-Pox. On the tenth day, the eruption generally appears, and the feveriſh ſymptoms go off. At this time, the puſtules on the inoculated part are filled with matter. Sometimes no eruption takes place after the fever, and yet the patient is ſecure from the Small-Pox; but to render him ſecure, it is abſolutely neceſſary that there ſhould be ſome degree of fever on the eighth day, or later, and that the inoculated ſpots ſhould continue ſtill longer inflamed. The treatment in inoculation

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is preciſely the ſame as in the natural Small-Pox. The patient ſhould be kept as cool as his feelings require, and be permitted to walk in the open air. Ripe fruits, cold water, barley-water, &c. rendered agreeably acid with lime-juice, may be taken freely, ſo as to keep the bowels open. If coſtive, the purging ſolutions ought to be given, as already preſcribed; and if the inoculated ſpots become ſore, they may be dreſſed with a little cerate, or ſimple ointment. It becomes neceſſary here to inſert a caution, that where the inoculation is not general, the patients muſt be kept ſeparate from the others, with the ſame care as if they had the natural Small-Pox, otherwiſe they will ſpread the infection.

The late important diſcovery of the Cow-Pox, renders the practice of Inoculation ſtill more ſimple, and removes every poſſibility of danger. Thoſe who wiſh to confer a benefit upon mankind, and to make ſome reparation to thoſe unhappy nations who have derived only miſery from their acquaintance with Europeans, and who have ſuffered ſo dreadfully from the Small-Pox, will endeavour to convey to them the bleſſings of the Cow-Pox Inoculation. To enter into the merits of this diſcovery would too much enlarge the preſent work; but the author earneſtly recommends the practice to the ſerious conſideration of every benevolent commander of a veſſel, who may receive full information reſpecting the mode of practice from an uſeful publication (price 2s. 6d.) entitled "A conciſe View of the moſt important Facts concerning the Inoculation for the Cow-Pox, by C. R. Aikin." To which is added a plate repreſenting the puſtules in their different ſtages. The only obſtacle to the proſecution of this plan, is the difficulty

difficulty of preſerving Cow-Pox matter, in an active ſtate, for a length of time. It may be procured from any ſurgeon at the port from whence the veſſel ſails, or from the Vaccine Inſtitution, in London, by addreſſing a letter to the Secretary in Golden Square.

WOUNDS made by a ſharp cutting inſtrument are more eaſily cured than thoſe made by a blunt one, becauſe in the latter caſe the part is bruiſed. The moſt alarming circumſtance, and that which firſt excites attention in a wound is the loſs of blood immediately enſuing: the real danger however does not in general depend ſo much upon the quantity of blood loſt as upon the ſuddenneſs of the loſs. The blood is circulated by two kinds of veſſels, arteries and veins: the arteries carry the blood from the heart to all parts of the body, from whence it returns by the veins to the heart. A perſon may die in conſequence of loſs of blood either from a vein or from an artery, but unleſs very large veins be opened ſuch as thoſe in the neck, the upper part of the thigh, &c. the bleeding from veins is ſeldom ſuch as proves dangerous, and may in general be eaſily ſtopped. On the contrary the bleeding from an artery, except it be a very ſmall one, is always troubleſome; and being apt to return, is frequently dangerous. When an artery is cut through, the end of it is ſometimes contracted like the mouth of a purſe, in conſequence of expoſure to air; and thus the bleeding is ſtopped. This however ought never to be truſted to, for before it takes place the life of the perſon may be brought into danger. The arteries have a peculiar beating motion

tion called the pulſe, which is eaſily felt by preſſing the finger upon the wriſts, temples, or any other part where the artery runs upon a firm ſubſtance: it may alſo be ſeen in the large arteries of the neck, after violent exerciſe, or in fevers, &c. This beating can neither be ſeen nor felt in the veins, where the blood has a conſtant regular motion. We diſtinguiſh whether an artery or vein be wounded, by attending to the following circumſtances. If an artery be wounded, the blood iſſues out in jerks or ſtarts, and if it be a large artery, the blood is thrown to a conſiderable diſtance. When a vein is wounded, the blood flows in a regular ſtream. The blood from an artery is of a bright ſcarlet, that from a vein of a dark red colour, almoſt approaching to black. Fainting is the general conſequence of the loſs of much blood, and always gives an alarm to the by-ſtanders, who officiouſly endeavour to recover the perſon by giving him cordials, or holding ſmelling bottles &c. to his noſe. When a wounded perſon faints, the bleeding almoſt always ceaſes; inſtead therefore of rouſing him, by which the bleeding would be renewed, the faintneſs ought rather to be encouraged as a favourable occurrence. It would be moſt adviſable at this time to lay the perſon upon his back; to expoſe him as much as poſſible to the cold air; and to give him nothing but a little cold water: the following methods may then be made uſe of to prevent a return of bleeding. If the blood veſſel which is cut be ſmall, bring the edges of the wound cloſe together, and keep them ſo, by ſmall pieces of ſticking plaiſter laid acroſs, making a gentle but ſteady preſſure for a few hours afterward, with a cloth four or five times doubled. Or a piece of lint three or four times folded

folded and well dipped in flour, or wetted with very ſtrong ſpirits, may be laid over the wound, and a bandage be rolled moderately tight round the limb. When a large artery is divided in the arm or leg, the bleeding is ſo profuſe that death may enſue in a few minutes. The only means of preſervation, is by applying an inſtrument called by ſurgeons a tourniquet; * but the inſtrument can only be employed during a few hours, for if it were to be drawn tight, and applied for a long time, a mortification would be the conſequence. When the tourniquet is properly applied, we have the bleeding perfectly at command, and need not be apprehensive: the congealed blood may be waſhed away, and the bleeding veſſels be detected. As ſoon as this is done, the veſſels may be laid hold of ſingly, by a pair of ſmall pincers or tweezers: or a crooked needle may be paſſed through each, ſo as to draw it out gently till a double thread can be put round it, which muſt be tied in a common knot. No further apprehenſion need then be entertained of the bleeding. If the mouth of an artery cannot eaſily be ſeen, the tourniquet muſt be ſlackened a very little, by which means the blood will be thrown out in a ſtream, and thus point out the hidden veſſel. Where the wound is ſo ſituated that the end of the artery cannot be taken up and tied, the following plan may be adopted: a piece of

* Tourniquets ſhould always be carried out in trading veſſels; and ſome perſon on board ſhould learn to be dexterous in the application of them. In caſes of emergency, where no ſuch inſtrument is at hand, a handkerchief or garter may be rolled up, tied round the arm, and twiſted tight by a ſtick.

common

common ſponge muſt be cut of a ſufficient ſize, and preſſed ſtrongly into the wound, as nearly on the mouth of the divided artery as poſſible. Over the ſponge may be applied a piece of cloth, lint, &c. four times doubled: a bandage muſt next be rolled cloſely round the limb. The tourniquet may be kept tight for half an hour or an hour, and then be gradually ſlackened. Before its application the ſponge muſt be made as dry as poſſible, by expoſure to a fire or to the ſun. The ſponge ought not to remain longer in the wound than ten days, as it is apt to ſtick too faſt: after the fifth or ſixth day, therefore, an attempt may be made to remove it by ſoaking it well with warm water, then taking hold of, and gently raiſing up ſome part of it, which may be cut off by a pair of ſciſſars; a piece of dry lint being ſoftly put under its edges every day: but if the ſponge adheres firmly, and cannot be ſeparated without tearing open the wounded blood-veſſel, it may be ſuffered to remain, until it be looſened by a natural proceſs. When a blood-veſſel is wounded, in a part where neither a tourniquet, nor a circular bandage can be applied, the bleeding may generally be reſtrained by placing a piece of dry ſponge upon the opening in the veſſel, and preſſing firmly upon it with the fingers during three or four hours; and in urgent caſes, there ought to be a ſucceſſion of perſons, ſo that when one is weary, the preſſure may be continued by another.

In every wound, if there be dirt, ſplinters of wood, &c. they muſt firſt be carefully removed, and the part be waſhed with a ſponge and a little warm water. After the wound is cleanſed, its edges muſt be brought as cloſe as poſſible to each other, and kept ſo by ſmall ſlips

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of ſticking plaiſter laid acroſs them. Over this is to be applied a little tow made in the form of a cuſhion, and ſecured by a bandage rolled moderately tight round the limb. The dreſſings firſt applied to a wound, ought not to be removed for three or four days, or until there be a ſufficient diſcharge of matter to permit them to be taken off eaſily. If the dreſſings be forcibly removed, there is a hazard of opening the wound again, and bringing on a freſh bleeding. At the ſecond dreſſing, a little cerate or ſimple ointment ſpread thin upon lint, tow, or cloth, may be applied once, or if the diſcharge be very great, twice in twenty-four hours, until the wound be healed. If, after the application of the firſt dreſſings there be much ſwelling and pain, a large poultice of caſſada, or linſeed meal moderately warm, may be applied over the part, without removing the bandage or dreſſings, and repeated ſeveral times a day. It muſt be obſerved, however, that if the pain and ſwelling be conſiderable, the bandage ſhould be ſlackened a little. It will always be proper where the pain is great, to give 30 or 40 drops of laudanum at bed time, and to repeat the doſe in a few hours, ſhould the firſt not produce the deſired effect. If the wound be in the leg or foot, it is generally more difficult of cure than when in the arm, or trunk of the body; and is very apt by neglect to degenerate into a troubleſome ulcer: to avoid this, the leg ſhould be conſtantly laid up nearly as high as the body.

GUN-SHOT WOUNDS are more dangerous than thoſe made by a ſharp inſtrument, becauſe the part is at the ſame time bruiſed, and frequently much torn. It is neceſſary

ceſſary in this caſe, firſt to moderate the bleeding from the part, if it be violent, by the methods already mentioned; and, in the next place, to aſcertain whether the ball or any part of the clothes, or the wadding be lodged in the wounded part. If there be a wound on the oppoſite ſide, it is a proof that the ball has paſſed through the limb: nevertheleſs, ſome part of the clothes, &c. may be retained: to diſcover this, dip a finger in oil, and introduce it as gently as poſſible into the wound, at either of the orifices; by this means, when the ball has not taken a very ſlanting direction, any ſubſtance lodged in the wound will eaſily be felt, and muſt be drawn out, with as little violence as poſſible. Indeed, if the ſubſtance lodged there cannot be extracted without uſing force, it may be ſuffered to remain; as it will become looſe, when the wound ſuppurates. If the ball not having paſſed through the limb, be ſo near the ſurface that it can eaſily be extracted, it muſt be taken out immediately; but if it lies deep, it muſt be left there, care being taken to remove any pieces of rag, ſplinters, &c. which are within the reach of the finger. When the ball has paſſed through the part, a little lint dipped in a mixture compoſed of equal parts of oil and wine may be applied to each orifice; and a large poultice ought to be applied over the whole. Where there is but one wound, whether the ball remains within or not, the ſame practice may be employed, and the poultice muſt be renewed three or four times a day. Pieces of rags, clothes, &c. left in the wound, are more apt to cauſe pain and inflammation than a muſket-ball, which frequently remains for years after the wound is healed, without giving any trouble. There is frequently little or no

bleeding

bleeding after a gun-ſhot wound, for the firſt five or ſix days; care ſhould be taken, therefore, in large wounds, or where it is apprehended that a large artery may be injured, to have a tourniquet looſely applied to the limb during the firſt week, that in caſe a bleeding ſhould come on, it may immediately be reſtrained. To relieve pain 40 or 50 drops of laudanam may be taken, and repeated every night as occaſion requires. When the pain and inflammation round the wound are abated, and a proper, thick yellow matter appears upon it, the poultice may be omitted: the part is then to be dreſſed with cerate, &c. like any common wound.

In all freſh wounds attended with much pain and inflammation in the part, with reſtleſſneſs, with a hot and dry ſkin, and a quick pulſe, the patient muſt abſtain from fleſh meat, ſpirits, and every thing heating: for the firſt week, or ten days he muſt live chiefly upon tea, bread and butter, boiled rice, light puddings, ſago, &c. and take occaſionally a tea ſpoonful of ſpirit of nitre, or antimonial wine, with 30 drops of laudanum at bed time, in order to produce a gentle perſpiration. The bowels ſhould be moved once or twice a day by gentle doſes of ſalts, &c. Should the perſon have been previouſly much reduced by ſickneſs, he need not make any alteration in his food; but may uſe a diet as nouriſhing as his ſtomach will bear; in ſlight wounds alſo, little attention to diet is neceſſary.

It has been already obſerved (page 3), that BLOOD-LETTING is very rarely required in Africa, and the ſame may be ſaid of other hot climates. In conſequence of this, no directions are given how to open a vein:

vein: the operation is too nice to be learned from deſcription, and in unſkilful hands it may prove dangerous. Contrary to the opinion commonly received, bloodletting is not in general neceſſary in external injuries; and it may for the moſt part be diſpenſed with even in injuries of the head. In the latter caſe, it will be much ſafer to truſt the cure to low diet, cool air, and occaſional purging with Epſom ſalts: 30 or 40 drops of tincture of opium may be given at bed-time, with the ſame quantity of antimonial wine, which laſt may be repeated alone every four or ſix hours, taking care not to excite vomiting. While this plan is purſued, it will be of great ſervice to fold round the head cloths dipped in very cold water, or vinegar and water, which ſhould be frequently moiſtened.

Fractures of the Ribs are thoſe caſes of external injury in which, owing to the vicinity of the lungs, bleeding is moſt neceſſary. A fractured rib may be diſcovered by feeling that one of the broken ends of the rib yields ſomewhat to preſſure, and produces a grating kind of noiſe. This accident is in general attended with much pain, increaſed by breathing, which in general is performed with difficulty. There is cough, ſometimes ſpitting of blood, and a quick pulſe. To diminiſh pain, and render the breathing eaſier, it will be proper to take away ſome blood. The patient ſhould be put to bed, with his breaſt raiſed pretty high: animal food, and every kind of liquor, muſt be avoided. A doſe of ſalts may be given and repeated every three or four days as occaſion requires; and to relieve pain, 30 or 40 drops of tincture of opium, and as much antimonial wine may be given at night. A broad bandage, or belt, may be faſtened round

the

the cheſt, moderately tight, to confine the motion of the ribs, which will render the breathing leſs painful.

Bruises or Sprains, are often more painful, and when improperly treated, more tedious in their cure than even a broken bone. If the ſkin be not broken the part may be bathed with a mixture conſiſting of a pint of vinegar and the ſame quantity of water, to which a table ſpoonful of the extract of lead may be added; cloths three or four times folded and kept continually moiſtened with this compoſition, muſt be applied to the affected part. When the ſkin is broken apply a little cerate upon the ſore part; and waſh the ſurrounding ſwollen and bruiſed parts, with the ſame application. When the injury has been received on the leg or foot, the part ſhould be kept conſtantly laid up in a line with the body to prevent its ſwelling and breaking out into an ulcer, which would prove ſtill more painful and troubleſome than the original complaint. Sometimes it will be found uſeful to cover the bruiſed part with a poultice of oatmeal and vinegar, which ought to be renewed twice during the courſe of the day. To abate the pain, 30 or 40 drops of laudanum may be given at bed time; and the bowels muſt be kept open by gentle purgatives, as ſalts, &c. When the redneſs and heat of the part are removed, and only a deep ſeated pain is felt, with ſtiffneſs on motion, the part may be rubbed three or four times a day with equal parts of hartſhorn and oil; or ſpirit of hartſhorn, ſweet oil and rum, in equal quantities. In old ſprains, cold ſea water poured upon the part from a height, through the ſpout of a tea-kettle, is often of the greateſt ſervice.

Ulcers

Ulcers occur frequently on the coaſt of Africa from the moſt trifling cauſes, and are much more difficult to heal than in a temperate climate, where they appear to be variouſly modified according to the conſtitutions of individuals, and heal, in ſome, without any particular care: on the other hand, every perſon who has reſided long in Africa, and has ſuffered repeated attacks of illneſs, acquires more or leſs of a depraved, or vitiated conſtitution, in conſequence of which, any wound, bruiſe, or ſcratch, however ſlight, is uſually ſucceeded by a foul ſpreading ulceration. When the ulcer becomes free from pain, and is covered with matter of a yellowiſh-white colour, having the thickneſs of cream, and emitting no diſagreeable odour, it is in a good ſtate; when the matter is removed by gently touching the ſore with a piece of dry lint, if the ſurface looks red, and a number of ſmall red points appear in it, we may conclude that the ulcer is healing,: and under theſe circumſtances, the cerate mixed with red precipitate, as directed hereafter may be applied, until the ſore is healed. When the ſore is dry, or covered with a thin dark coloured, or bloody and fetid matter: or when its whole ſurface ſeems to be covered with dead pieces of ſkin, or ſloughs, it is probable that the complaint will prove obſtinate. In this caſe a poultice made of the root of caſſada boiled and beat ſmooth, or of linſeed-meal with water, muſt be applied three or four times a day, and continued for three or four days, or until the diſcharge from the ulcer is increaſed in quantity, and becomes of a thicker conſiſtence. The poultice may then be left off and the ſore be dreſſed with an ointment compoſed of a dram of red precipitate mixed with an

ounce

ounce of cerate. The ointment muſt be ſpread thin upon a piece of lint or tow, and laid lightly over the ulcer every day: but if the diſcharge be very great, the dreſſing may be applied twice a day. When the ulcer is upon the leg, this limb muſt be laid upon a chair or bed, as reſt is of the greateſt conſequence towards a cure. In ulcers of the legs, a conſiderable degree of ſwelling often takes place towards evening about the ancles, which diſappears, or is much leſſened in the morning after a night's reſt. This may always be prevented by ſwathing the leg evenly, with a flannel or callico bandage. When it has been brought on by walking, &c. it may be removed by reſt, by occaſionally taking a moderate doſe of ſalts, and by wearing a roller, carefully applied. When an ulcer is in a healing ſtate, the red fleſh ſometimes riſes higher than the level of the ſkin, which ſurrounds the edges: this is called proud fleſh, and it muſt be brought down to the level of the edges, by touching it every day with a little blue vitriol; or what is better, by applying a piece of lint dipped in water, wherein as much blue vitriol has been diſſolved as the water will take up. When the new fleſh is reduced to its proper level, the ſore appears of a cherry colour, and is covered with a ſmall quantity of thick, yellowiſh coloured matter: it may then be dreſſed with a little cerate ſpread upon lint or tow; or if there be a great quantity of matter a little dry lint may be firſt applied to the ſore, and the other plaiſter put over it. When an ulcer is very hot and ſwollen round the edges, the ſound ſkin round the ſore appearing likewiſe red, and inflamed, a poultice of caſſada, or linſeed-meal ought to be applied ſeveral times a day, until the redneſs and

ſwelling

ſwelling on the edges of the ſore be removed or abated. An ulcer heals always from the edge towards the center: a very fine ſkin or film being firſt formed at the edge all around, and gradually ſpreading over the whole ſore.

As ointments are very apt to become rancid in a hot climate, and thereby irritate an ulcer when in a healing ſtate, the following application will often be found of uſe.—Take four parts of honey and one part of wax, melt, and afterwards ſtir them together till the mixture be cold. When an ulcer is filled up with new fleſh, and only wants ſkinning over, ſmall ſtrips of lint, about a quarter of an inch broad, may be ſpread with this ointment and laid upon the edges of the ulcer, its central part being covered with a piece of dry lint. If however there is not matter ſufficient upon the ſore, to allow of the lint being eaſily removed, it muſt never be rudely torn off, but may be ſuffered to remain as long as it adheres: and very often the ſore will heal underneath it, before it be ſufficiently looſened to permit its being ſeparated, without tearing off the tender ſurface. In ulcers of long ſtanding, a generous diet will be found of uſe. When the ulcer is upon the leg, or foot, and the patient cannot remain at reſt, a flannel or callico roller about three fingers breadth muſt be applied, in the morning, moderately tight round the leg, from the foot to the knee. When ulcers break out after a fever, or when the patient has been weakened by ſome other diſeaſe, it is of the utmoſt conſequence to endeavour to reſtore his general health; for unleſs this can be accompliſhed, it is probable, whatever attention may be paid to it, that the ulcer will never heal. A good nouriſhing diet muſt be uſed, and a tea-ſpoonful of bark

taken four times a day, or oftener if the ſtomach will bear it. When there is much pain preventing ſleep, one or two grains of opium may alſo be taken at bed time.

Such is the difficulty of healing ulcers in a hot climate, that they frequently reſiſt every mode of application, and continue for weeks or months in the ſame ſtate. In theſe caſes it will be found uſeful to vary the applications. The ſurface of the ulcer may be ſprinkled with powder of rhubarb, or of Colombo every day, ſo long as it appears to agree with the ſore, and does not excite much pain. Sometimes it is found ſerviceable to ſprinkle powder of Peruvian or Anguſtura bark, to a conſiderable thickneſs over the ulcer; this may be either the whole application, or the bark may be moiſtened ſeveral times a day, with vinegar, or vinegar and water, or with lime juice; or, if that ſhould excite much pain, with lime juice and water. A cloth, four fold, and wet with one-third vinegar and two-thirds water, may alſo be applied. Theſe applications will be found eſpecially uſeful in ſcorbutic ulcers; at the ſame time bark and lime juice may be given liberally internally. When an ulcer has been long ſtationary, and is of an indolent nature, unattended with pain, its ſurface may be covered with Peruvian bark, and moiſtened with oil of turpentine. Whatever applications are made, unleſs great attention be paid to cleanlineſs, and to the renewal of the bandages frequently, the ulcer will not heal. The patient ſhould not ſleep in a confined place, nor among a number of people. The air of a priſon, hoſpital, or other cloſe, crouded place, is of itſelf ſufficient to make Ulcers ſpread. The diet ought to be nouriſhing:

nouriſhing: ſalted meats and ſpirituous liquors ſhould be prohibited.

Boils, or ſmall inflamed tumours, are often very troubleſome to perſons recovering from fever, or who are otherwiſe in a ſtate of debility: they are ſeldom larger than a walnut, often as ſmall as a pea. When they are very hard and painful, and of a ſhining red colour, they may be bathed frequently with cloths dipped in hot water: and a poultice of oatmeal and Goulard ſhould be applied warm three or four times a day. As ſoon as the top of the boil appears yellowiſh, and becomes ſoft, it may be opened with a needle, and the matter may be gently preſſed out. The poultice ſhould be continued for a day or two, and the ſore be afterwards dreſſed with cerate or ſimple ointment upon lint or rag. When a poultice cannot be conveniently kept on, a little ſticking plaiſter ſpread on cloth, or turpentine may be applied: this very ſoon cauſes the boil to ſuppurate, but it is not ſo eaſy an application as a poultice. When the pain is ſevere, two grains of opium may be taken at bed time, and a gentle laxative, when neceſſary.

Burns, or Scalds. As ſoon as the accident is received, if the part be dipped in ſpirit of wine, or ſtrong vinegar, and kept there for ſome time, the pain will be very much abated. Cloths wet with a mixture of ſpirit, and vinegar, in equal proportions, half an ounce of extract of lead being added, muſt be afterwards kept conſtantly applied, and moiſtened as often as they become dry or warm. By purſuing this plan the pain will

 ſubſide

ſubſide in a very few hours, and the inflammation be prevented from ſpreading. When ſmall bliſters appear on the ſkin, they may be opened with the point of a needle, or a pair of ſciſſars, and the water may be gently preſſed out, care being taken at the ſame time to prevent the acceſs of air. The ſkin ſhould not be removed, but left as a defence to the tender parts below. When the pain is ſevere, 30, 40, or 50 drops of laudanum may be taken immediately, and repeated if neceſſary every night at bed time. As ſoon as the pain is, by theſe means, nearly removed, the ſore may be dreſſed with a little cerate, or oil and wax melted together. If the burn has been very ſevere and a part of the ſkin turns black, with an appearance of mortification; after the pain has abated by the uſe of ſpirit of wine and vinegar, a poultice of caſſada, or of oatmeal and Goulard may be applied warm, and repeated three or four times a day, until the dead part be thrown off. The ulceration may then be dreſſed with cerate, or ſimple ointment in the uſual manner. An opiate may be given at night, and a doſe of ſalts taken occaſionally to keep the bowels open. The diet ſhould be that recommended in wounds, &c.

Since the above was written, a new mode of treating burns and ſcalds, has been introduced by my friend Dr. Kentiſh, of Newcaſtle, which has been found uncommonly ſucceſsful. Some oil, or ſpirit of turpentine is to be heated by ſtanding in a cup placed in hot water, and with this the injured part is to be bathed. It muſt then be covered with a liniment compoſed of baſilicon, or of an equal quantity of oil and wax rendered nearly as thin as honey, by means of ſpirit of turpentine,

and

and ſpread upon ſoft cloth. This will be found to abate the ſeverity of the pain, but it will be proper to give from 40 to 60 drops of laudanum immediately after the accident. If the injury be extenſive, the patient ought to be put to bed as ſoon as the part is dreſſed, and if ſeized with a cold ſhivering, as generally happens in large burns, a glaſs of ſpirit, with an equal quantity of hot water, or a glaſs of hot negus, or mulled wine, may be given. Bottles of hot water, or hot flannels, may be put to the feet, and an additional quantity of clothes on the bed, till the natural heat be reſtored. The dreſſings muſt be repeated only once in twenty-four hours. At the ſecond time of dreſſing, inſtead of bathing the part with oil of turpentine, it muſt be bathed with rum, brandy, or any other ſpirit, made warm, and immediately covered with the liniment above directed. This muſt be continued until matter is formed round the edges of the burn, and the dead ſkin is looſe, and ready to be thrown off. To avoid giving pain, the liniment muſt now be laid aſide, and the ſore be dreſſed with cerate or ſimple ointment. If the diſcharge of matter from the ſore be very great, it may be covered with a quantity of finely powdered chalk; and the patient ſhould be confined to a vegetable diet, and take a gentle doſe of ſalts every four or five days. Twenty-five or thirty drops of laudanum may be given every night to abate pain or reſtleſſneſs.

Excoriation, or Chafing, frequently takes place under the arms, between the thighs, &c. after labour or ſtrong exerciſe. It may generally be prevented by frequent waſhing with warm water. The cure of it is

ſoon accompliſhed by waſhing the chafed parts with a tea-ſpoonful of the extract of lead mixed in a pint of water, to which a table-ſpoonful of brandy is likewiſe added. In the ſame circumſtances, or often through the want of cleanlineſs, excoriations happen behind the glans, and underneath the prepuce; which are uſually ſoon relieved by the mode of treatment above mentioned.

Fatal accidents are ſometimes occaſioned by Poisons taken into the ſtomach, ſuch as arſenic, white lead, verdigreaſe, &c. In all theſe inſtances, vomiting ought to be excited immediately, as above directed, and the patient ſhould drink freely of warm water, milk, where it can be procured, fat broths, or warm water and ſweet oil. After the ſtomach is ſufficiently cleanſed, a large doſe of Caſtor oil, or Epſom Salt, ſhould be given to carry the hurtful ſubſtance downwards. Violent ſickneſs and vomiting, with violent contraction of the limbs, and muſcles of the belly, ſevere colic pains, cold ſweats, fainting, &c. ſometimes come on a few hours after a meal, in conſequence of the food having ſtood in copper veſſels.—The ſame mode of treatment muſt be adopted as in the other caſes.

The Bites and Stings of Poisonous Insects, as the centipes, tarantula, ſcorpion, &c. are attended with ſevere pain, which frequently continues ſeveral hours. Theſe wounds are not dangerous, and will heal without any application. The pain may be abated by taking 40 or 50 drops of laudanum: and if it can be done conveniently, the part may be held for ſome time in

in warm water, and be afterwards rubbed with equal parts of rum or brandy, and laudanum.

Cockroaches, ants, and other insects, often creep into the ear, and create intolerable pain. They may be killed almost instantaneously by pouring a few drops of sweet oil into the ear. When proper means have not been used to remove them, inflammation of the inner ear may be produced, requiring the mode of treatment directed page 83.

Submersion, or Drowning. Persons who unfortunately fall into rivers, &c. are often neglected when taken out, from their being apparently dead, though by proper attention life might have been restored to them. It is impossible to determine how long a body may remain under water, and yet recover animation: in some instances, a very few minutes have proved fatal, notwithstanding every possible exertion; while in others, persons have been restored to life after remaining near half an hour in the water. Such instances therefore should encourage us to make the attempt in every case, however unfavourable the circumstances may at first sight appear. The principal aim must be, 1. To restore the motion of the lungs as in natural breathing. 2. To restore warmth to the body.

1. As soon as the body is taken out of the water, it should be undressed, rubbed dry, and laid upon a matrass, straw, &c. with the head and breast moderately raised: the froth and slime must be taken out of the mouth by introducing a feather, or the finger wrapped up in a piece of cloth. Motion must be given to the lungs by gently filling them with good air, which may

be done by means of a common pair of bellows, or where theſe cannot be procured, by the mouth of a healthy perſon. The nozzle of the bellows ſhould be introduced into one of the noſtrils, while the other noſtril and the mouth are kept cloſed, in order to prevent the eſcape of the air. At the ſame time, to prevent it from paſſing into the ſtomach through the gullet, which runs behind the wind pipe, ſome perſon muſt preſs gently upon the projecting, or bony part of the throat. When theſe ſteps have been taken, the air ſhould be gradually diſcharged from the bellows, by which means the breaſt will be raiſed a little: the ribs muſt then be gently preſſed down, to expel the air received, as is done in natural, eaſy breathing. This plan of inflating the lungs with air by a pair of bellows, or from the lungs of a healthy perſon, and of again preſſing it out, muſt be continued without interruption for one or two hours at leaſt; as many have been reſtored to life after longer trials, extending even to four hours. If during this time any ſpontaneous breathing returns, the artificial inflation may be left off, or only uſed occaſionally to aſſiſt the lungs when their action ceaſes, or appears very weak.

2. While the above plan is in execution, three or four perſons ought to be employed in attempts to warm the body, by rubbing with their hands, or with flannels, the back, belly, arms, thighs and legs. The rubbing muſt be performed gently at firſt, and afterwards more briſkly. When the body feels very cold, it will be better to make theſe attempts in the ſhade, but if a conſiderable degree of warmth ſtill remain, or has been excited artificially, the body may then be expoſed to a hot

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ſun-ſhine. A little ſpirit of hartſhorn or ſnuff may be occaſionally held to the noſe; or it may be tickled with a feather. The body may now and then be turned from the back to the right ſide, and back again; but it ſhould not be ſhaken in a rough manner. Rolling upon a caſk, or hanging up a body by the heels is never to be attempted. Should the body at length become rather warmer, and a ſlight beating of the heart be perceived, or ſhould a groan, or ſigh eſcape, though at long intervals, there is every reaſon to hope for complete ſucceſs. When at length the breathing is in ſome meaſure reſtored, the perſon ought to be put into bed (his head and breaſt being raiſed) between two naked perſons, who may ſtill continue to rub or gently ſhake the body, taking care not to preſs upon the cheſt for fear of interrupting the breathing. While he is in bed, or indeed before, hot bricks, &c. may be applied to the feet, and renewed occaſionally. A little hot wine, or ſpirit and hot water may be given by tea-ſpoonfuls at a time as ſoon as the power of ſwallowing has returned. When the perſon has ſomewhat recovered, a clyſter, or a gentle doſe of ſalts or caſtor oil may be employed to empty the bowels. Sago, boiled rice, &c. with wine, ſhould be uſed for food during the firſt two or three days after recovery. Not more than ſix or eight perſons ſhould be admitted round the body; eſpecially if it be carried to a confined place, which is often done, but ought always if poſſible to be avoided.

Of the Weights uſed in Medicine.

The troy pound is that which apothecaries uſe in compounding their medicines: it contains twelve ounces. The pound and ounce are exactly the ſame as thoſe employed for weighing gold; but the ounce is differently divided. The goldſmiths divide their ounce into twenty pennyweights, and each pennyweight into twenty-four grains: the apothecaries divide their ounce into eight drachms, (or four hundred and eighty grains): the drachm is divided into three ſcruples, (or ſixty grains); and the ſcruple into twenty grains.

The weights are thus marked:

The pound . . .	℔ i	contains . . .	℥ xii
The ounce . . .	℥ i	——— . . .	ʒ viii
Half an ounce . .	℥ ſs	——— . . .	ʒ iv
Two drachms . .	ʒ ii	——— . . .	℈ vi
One drachm . .	ʒ i	——— . . .	℈ iii
Half drachm . .	ʒ ſs	——— . . .	℈ iſs
Scruple	℈ i	——— . . .	gr. xx
Half ſcruple . .	℈ ſs	——— . . .	gr. x

Grain weights are thin pieces of braſs with dots upon them, to denote how many grains each weighs.

Half an ounce meaſure of any fluid is equal to the contents of a common table-ſpoon.

A List of medicines, with the quantity sufficient for twenty men for one year.

A. Powder of Peruvian bark . . . . . ℔ x
B. ——— Angustura ditto . . . . . ℔ iv
C. ——— Colombo . . . . . ℔ j
D. ——— Rhubarb . . . . . ℥ x
E. ——— Ipecacuanha . . . . . ℔ j
F. Tartar emetic . . . . . ℥ ii
G. Antimonial wine . . . . . ℥ viii
H. Opium . . . . . ℔ ss
I. Laudanum . . . . . ℔ j
K. Calomel . . . . . ℥ xii
L. Sweet spirit of nitre . . . . . ℔ j
M. Oil of mint . . . . . ℥ iij
N. Huxham's tincture of bark . . . . . ℥ xii
O. Spirit of lavender . . . . . ℔ j
P. Epsom salts . . . . . ℔ x
Q. Camphor . . . . . ℥ xii
R. Gentian root . . . . . ℔ vi
S. Cream of tartar . . . . . ℔ iv
T. Castor oil . . . . . ℔ vi
U. Gum arabic . . . . . ℔ iii
V. Bilious or purging pills, N° 340.
W. Magnesia . . . . . ℔ ij
X. Salt of tartar . . . . . ℔ j
Y. Diluted vitriolic acid . . . . . ℔ j
Z. Diluted nitrous acid . . . . . ℔ ss

1. Cerate . . . . . ℔ iij
2. Simple ointment . . . . . ℔ iii
3. Red precipitate . . . . . ℥ vj
4. Blue vitriol . . . . . ℥ ij

 5. Blister

5. Bliſter plaſter . . . . . ℔ iii
6. Powder of Spaniſh flies . . . . . ʒ iv
7. Extract of lead . . . . . ℔ ij
8. Sugar of lead . . . . . ℔ j
9. Spirit of hartſhorn . . . . . ℔ ij
10. Flowers of ſulphur . . . . . ℔ x
11. Sticking plaſter ſpread on cloth.
12. Tow, lint, rags.

Stores for the Sick.

Barley . . . . . ℔ xij
Sago . . . . . ℔ x
Tapioca . . . . . ℔ x
Portable ſoup . . . . . ℔ vi
Vinegar . . . . . ℔ viij
Concrete acid of lemon . . . . . ℔ ij

To the above articles ſhould be added, ſugar, tea, coffee, molaſſes, onions.

A. *Peruvian Bark.* The uſe of this remedy has been already ſufficiently noticed.

B. *Anguſtura Bark*, is uſed in the ſame caſes and in the ſame quantity as the Peruvian bark; in fluxes however, after the bowels have been ſufficiently opened by purgatives, it is more uſeful than the other bark. It likewiſe contributes much to ſtrengthen the bowels when weak, or when a diarrhœa has continued for ſome time. It may alſo be employed in thoſe caſes where the Peruvian bark is apt to be too purgative.

C. *Powder of Colombo.*—This is a very excellent bitter. A doſe of 15 or 20 grains of it taken two or three times a day in water, ſtrengthens the ſtomach, and often removes

removes ſickneſs and vomiting in delicate conſtitutions. Patients recovering from fever, who are ſtill weak and cannot bear the bark, will find themſelves much benefited by the uſe of colombo.

D. *Rhubarb* is a very gentle purgative, and may be given when any thing has diſagreed with the ſtomach and bowels. Thirty grains of it taken in a little water, or warm water and a little ſpirit, will generally remove a looſeneſs.

E. *Ipecacuanha* is one of the gentleſt vomits which can be adminiſtered. When the ſtomach and bowels have been diſordered by any indigeſtible food, &c. the offenſive matter may be diſcharged by giving 20 or 25 grains of ipecacuanha, and a doſe of rhubarb the following morning. In fluxes ipecacuanha is not ſo effectual a vomit as the tartar emetic; and in fevers, when there is coſtiveneſs, a grain or two of emetic tartar ſhould be added, to render the ipecacuanha more quick in its operation, and to move the bowels. Twenty-five or thirty grains of ipecacuanha make a ſufficient doſe for a ſtrong man. A ſmall baſon full of warm water or tea may be taken as ſoon as ſickneſs is excited, and may be repeated every time the patient vomits. In general three or four ſmall baſons of tea, or warm water, will ſuffice to work off any emetic: when more is ſwallowed, it loads the ſtomach, and ſometimes prevents the intended effect.

F. *Tartar Emetic.*—Great caution ſhould be obſerved in uſing this medicine, as it is a very powerful emetic, and when given in too large a doſe, may be attended with fatal effects. A ſingle grain, or for very robuſt perſons, in whom the action of vomiting is not eaſily excited,

excited, 2 grains of tartar emetic, mixed with 15 or 20 of ipecacuanha, make a ſafe and effectual vomit; it is quicker in its operation than ipecacuanha alone, and does not produce that continued diſtreſſing ſickneſs which tartar emetic uſually occaſions when given ſingly. This remedy being very apt to purge briſkly, ought not to be given as an emetic in caſes of looſeneſs. In other diſorders it may be uſed alone in the following manner; diſſolve 3 grains of emetic tartar in a pint of water, and give 3 table-ſpoonfuls every fifteen minutes till it excites vomiting, when it ſhould be diſcontinued. In this manner it will purge more certainly than when the whole quantity is taken at once, and is therefore very uſeful at the beginning of fevers, or fluxes. Two or three drams of cathartic or Epſom ſalt added to the ſolution, will increaſe the purgative effect, if that ſhould be thought neceſſary.

G. *Antimonial Wine* is of the ſame nature as the laſt mentioned article. A table ſpoonful of it will generally excite ſickneſs and vomiting: its chief uſe, however, is to produce a ſweat, which it commonly does in the doſe of a tea-ſpoonful, more eſpecially if 25 or 30 drops of laudanum be united with it.

H. *Opium* is the moſt efficacious of all known remedies in relieving pains of the human body. Two grains of it in a pill form a ſufficiently large doſe; and are often retained on the ſtomach when liquids are rejected. The repeated uſe of it is apt to bring on coſtiveneſs, wherefore gentle purgatives muſt be occaſionally interpoſed.

I. *Laudanum*; *Thebacic Tincture*, or *Tincture of Opium*. —This is opium diſolved in a certain proportion of ſpirit, ſo that ſmall doſes of it can be given with greater exactneſs

activeness than of the solid opium. Thirty drops in a little of any liquid is a proper dose for a man. It does not always procure sleep, but generally keeps the person who takes it easy and quiet during the night.

K. *Calomel.*—This is a mercurial preparation, used either as a purge in the quantity of 6 or 8 grains, or as an alterative in smaller doses frequently repeated, until it renders the mouth sore and brings on a slight spitting. Six or eight grains of it will generally produce two or three stools: if it has not the desired effect within twenty-four hours, a dose of salts, castor oil, &c. must be given to prevent the mouth from being made sore. When it is intended to produce a salivation, one grain may be taken night and morning, or two grains at once every night. As soon as a disagreeable taste of copper or brass is perceived in the mouth, or when the gums become tender, hot, and rather sore, the medicine must be discontinued some time, lest the salivation be rendered too violent. If the bowels be costive, a dose of salts will also render the effects of the mercury less severe. When this remedy is taken, acids ought to be avoided, even the juice of lemons and oranges, as they are apt to cause griping pains in the stomach and bowels. Calomel does not act more violently as a purgative when given in a considerable dose than in a moderate one: neither is it more apt to gripe in a larger dose. It may also be observed that a boy of fourteen years is not more severely purged by 6 or 8 grains of calomel, than a man. The calomel may be made into pills with a little soft bread, or mixed up with molasses. A dram of calomel mixed with an ounce of pomatum, hog's lard, or of wax and oil melted together, makes an ointment to kill vermin in the head, &c.

L. *Sweet*

L. *Sweet Spirit of Nitre.*—Thirty or forty drops may be taken five or ſix times a day in water. It contributes much in fevers to preſerve a gentle moiſture upon the ſkin, to abate the thirſt, head-ache, and reſtleſſneſs; it may alſo be added to the patient's common drink. It frequently gives relief in the gravel, taken in the quantity of 60, 80, or even 100 drops at bed-time, alone, or joined with 30 drops of laudanum. When a copious ſweat is required, a tea-ſpoonful of this medicine and as much antimonial wine, may be taken in water, and repeated in ſix or eight hours: 30 drops of laudanum ſometimes make an uſeful addition to the firſt draught.

M. *Oil of Mint.*—This is chiefly uſed as a cordial. In ſickneſs at ſtomach, or when medicines ſuch as the bark, &c. cannot be retained, a ſingle drop of this oil added to each doſe frequently removes the nauſea. Six or eight drops of the oil rubbed with a little ſugar and about a tea-ſpoonful of powdered gum arabic, and then gradually united with a pint of water, makes the mint water, of which one or two table ſpoonfuls may be given in pains of the ſtomach and bowels ariſing from wind.

N. *Huxham's Tincture of Bark.*—The quantity of bark contained in this preparation is trifling, being not ſufficient to ſtop the ſlighteſt ague fit. A tea-ſpoonful of it added to the bark, or bitters, may render them more agreeable to the ſtomach, and ſomewhat increaſes their efficacy. When taken occaſionally with water, it ſeems only to anſwer the purpoſe of a dram.

O. *Spirit of Lavender* may be uſed in the ſame manner as the above, to render medicines leſs nauſeous to the ſtomach. In cholic pains a tea-ſpoonful of it taken in two table-ſpoonfuls of mint water, with the addition of

30 or 40 drops of laudanum, frequently relieves the pain.

P. *Cathartic*, or *Epſom Salts*. A table-ſpoonful of them diſſolved in a little ſalt or freſh water, operates as a gentle purgative. To render the ſolution more agreeable to the ſtomach, a little ſpirit, lime juice, and ſugar, may be added.

Q. *Camphor*. Six grains of this medicine diſſolved in a few drops of brandy, and rubbed with a little ſugar and gum arabic, two table-ſpoonfuls of water being gradually added, may be taken every two or three hours. It frequently removes thoſe violent head-achs ſo diſtreſſing in fevers; and is alſo ſerviceable in rheumatic pains. Thirty drops of laudanum, and as much ſpirit of nitre, may be occaſionally added to it, and will act very powerfully as a ſudorific. A dram of camphor diſſolved in two table-ſpoonfuls of any ſpirit, or as much palm oil, is extremely uſeful when well rubbed on parts affected with rheumatic pains, or which have been bruiſed or ſprained.

R. *Gentian Root* is a very ſtrong bitter. Upon 3 drams of the root, cut ſmall, a pint of boiling water muſt be poured, and left to ſtand for twelve hours; after which it may be ſtrained through a cloth for uſe. The infuſion is rendered more agreeable to ſome perſons, by adding to the gentian the outer rind of one or two limes, and after it is ſtrained, two ounce meaſures of ſpirit. A wine glaſsful of this bitter infuſion may be taken three or four times a day: it is much preferable to bitters made with ſpirit alone.

S. *Cream of Tartar*. This is a very pleaſant acid, and when diſſolved in water, may be uſed inſtead of lime-

juice

juice as a cooling drink in fevers. Half an ounce, or 6 drams diſſolved in warm water, is a gentle purge, and is of great uſe in dropſical complaints, by increaſing the quantity of urine.

T. *Caſtor Oil*, in the doſe of one or two table-ſpoonfuls, is generally a ſpeedy and effectual purgative. When the firſt doſe of the oil has no effect for four or five hours, the ſame quantity may be given every hour till it operates. The beſt mode of adminiſtering this medicine, is to put the requiſite quantity of it into a wine-glaſs containing a table-ſpoonful of water, by which means its unpleaſant taſte is in ſome degree prevented. To ſome ſtomachs the addition of a little ſpirit renders it more agreeable.

U. *Gum Arabic.*—Half an ounce or an ounce of this gum diſſolved in a pint of rice or barley water, may be taken as a common drink in purgings, or long-continued fluxes.

V. *Bilious or Purging Pills.*—In all caſes of coſtiveneſs, and when the bile ſeems to be too abundant, two, three, or four of theſe pills taken in the morning will be found of great uſe. They are prepared as follows: take an ounce of aloes, 2 drams of ſalt of wormwood, and half an ounce of liquorice, or extract of gentian: mix, and make theſe ingredients into one hundred and ſeventy pills.

W. *Magneſia.*—A tea-ſpoonful taken in water affords relief for the heart-burn, or acidity in the ſtomach. In the doſe of 2 or 3 tea-ſpoonfuls it proves an eaſy laxative.

X. *Salt of Tartar.*—This is chiefly employed in combination with lemon juice, or the concrete acid of lemons, as directed page 20. The compound is more grateful

grateful and more advantageous, if taken while in a ſtate of effervescence, immediately as the ingredients are added together.

Y. *Diluted Vitriolic Acid.*—From 10 to 30 drops of this acid may be taken in water two or three times a day. When taken along with the bark it is a good auxiliary, and often prevents the coſtiveneſs which the bark alone would occaſion. Its uſe in combination with magneſia is mentioned page 20.

Z. *Diluted Nitrous Acid.*—This acid ſtrengthens the ſtomach, and is a powerful antiſeptic. An uſeful beverage for perſons affected with putrid fevers, or with the firſt ſymptoms of ſcurvy, may be made by putting 30 drops of it, or ſomewhat more, to a quart of water, and adding ſugar enough to ſuit the patient's taſte.

Both the above acids are beſt kept in phials, having ground glaſs ſtoppers; and they ſhould be dropped out of the bottle with attention, as they injure the colour and texture of all linen or woollen cloth on which they fall.

EXTERNAL APPLICATIONS.

No. 1. *Cerate.*—A little of this ointment ſpread upon lint, tow, or rag, is a good application to wounds, ulcers, &c. This and all other dreſſings ſhould be laid lightly over the ſurface, not preſſed in between the edges of the ſore. When ſpread upon cloth, it is alſo a good application after a bliſter; if any water be retained in the bliſtered part, the veſications may be ſnipped with a pair of ſciſſars to let it out: but the ſkin muſt not be removed, as it ſerves for a defence to the tender parts underneath. A plaintain leaf makes a cool and pleaſant dreſſing for a bliſter.

2. *Simple*

2. *Simple Ointments* may be made by melting together as much yellow wax and oil as will become ſufficiently ſtiff for an ointment. They are uſeful for nearly the ſame purpoſes as the laſt article.

3. *Red Precipitate* is a very beneficial application to foul ulcers. One dram of it mixed with an ounce of either of the laſt mentioned ointments, forms one of the beſt common dreſſings for them. When the ſore is covered with a foul, dead ſkin or ſlough, a little precipitate ſprinkled over it renders it clean, and makes it look red and healthy. By the ſame means the new fleſh, or as it is called, the proud fleſh, is prevented from riſing above the proper level.

4. *Blue Vitriol.*—Two drams of this diſſolved in an ounce of water, may be applied by means of a little lint, to the edges of ulcers when there is proud fleſh. Or a piece of lint the ſize of the ſore may be dipped in the ſolution and laid over its ſurface: if the new fleſh ſtill continues too high, it may be repeated at the next dreſſing, or as occaſion may require.

5. *Bliſter Plaſter.*—This muſt be ſpread upon thin leather, but not with a hot knife, which would deſtroy the power of the flies.

6. *Powdered Spaniſh flies.*—In order to render the effect of a bliſter ſtronger, and more certain, ſome of the powdered flies may be ſprinkled over its ſurface and well preſſed in with the finger. Bliſters require in general twelve hours to produce their effect.

7. *Extract of Lead.*—Two or three ſpoonfuls of this mixed with a quart of water,* two table-ſpoonfuls of

* Or half water and half vinegar.

ſpirit

ſpirit being added, form Goulard's lotion. It is very uſeful for ſprains, &c. Cloths wet with this lotion muſt be kept conſtantly applied to the part, and moiſtened as often as they become warm or dry. Twenty drops of the extract added to two ounce meaſures of rain water, make a cooling waſh for ſore eyes.

8. *Sugar of Lead* is uſed in the ſame manner, and in the ſame caſes as the laſt. Two drachms of it may be added to a quart of water.

9. *Spirit of Hartſhorn.*—A table-ſpoonful of it mixed with as much oil, or common ſpirit, is employed with advantage to rub bruiſes or ſprains, after the heat and tenderneſs of the part have been abated by the application of Goulard's lotion for a few days. It is likewiſe uſeful when applied to the noſtrils, or rubbed on the forehead and temples in head-ache, faintings, &c.

10. *Flowers of Sulphur.*—This, when rubbed up with butter, or ſimple ointment, is applied to the ſpots in the crawcaws or itch, which it preſently cures. One or two tea-ſpoonfuls of the powder mixed with a little molaſſes is a gentle purge, frequently found uſeful in the piles.

The abovementioned doſes of medicines are intended for a full grown man: a boy of twelve or fourteen may take half the quantity. To prevent miſtakes, thoſe medicines which are to be taken internally, are diſtinguiſhed by the letters of the alphabet; thoſe which are uſed externally are marked with numerals.

It will be very proper to have the name of each medicine paſted upon the ſide of the bottle or jar which contains it: and leſt this ſhould be torn or dirtied, the letter of

of the alphabet, or number belonging to each medicine, ſhould alſo be paſted upon the bottom, ſo that it may always be known by referring to the liſt.

The ointments ſhould be kept in jars with painted tin covers: all the medicines ſhould be put in bottles with ground glaſs ſtoppers; by which means only can they be preſerved in good order for any conſiderable time. Corks covered with wax do not ſufficiently keep the powders from moiſture or damp: beſides, cockroaches are very apt to eat through the wax and deſtroy the corks.

The moſt convenient form for the medicine cheſt will be an oblong ſquare, having partitions running along the ſides and ends, at the bottom, to receive the larger bottles; this will leave an empty ſpace in the middle, where the mortar, tow, lint, &c. may be put. At a proper height above the lower bottles, a ſimilar ſet of partitions ſhould run along the ſides and ends, which would alſo leave a ſpace in the middle to be filled up by a kind of box divided into partitions if neceſſary, and made to be taken out and put in at pleaſure. The cheſt ought to be ſecured by a good lock to prevent improper perſons from making free with its contents.

The following utenſils are neceſſary for the medicine cheſt.

1. A half pint marble, or glaſs mortar.

2. A box of ſcales, which may be of the ſize commonly uſed for weighing gold; and a ſet of weights, not extending higher than the half ounce and ounce troy.

3. A ſpatula, or knife for ſpreading plaſters.

4. A ſmall funnel.

5. A pewter meaſure, the upper part of which contains an ounce, and the under part half an ounce.

6. A

6. A large pewter ſyringe for clyſters, having two pipes, one curved, ſo that the inſtrument may be uſed by the patient himſelf.

7. A few ſmall gallipots, phials, corks, &c.

[Omitted after Rupture, page 96.]

Rupture ſhould be carefully diſtinguiſhed from SWELLING with INFLAMMATION of the TESTICLE. The latter takes place when a blow has been received on the part, or when a man has bruiſed it by falling on any hard ſubſtance. The teſticle becomes enlarged, and very painful, with great heat, and redneſs of the ſcrotum. Sometimes the perſon hurt is ſick, and vomits immediately after the accident; but this does not always prove the caſe. When the teſticle is very much inflamed, the part becomes ſo tender that the patient cannot bear the leaſt preſſure to be made on it: he generally complains of ſenſe of weight and uneaſineſs extending to the loins, and cannot ſtand or walk without ſuffering great pain. The ſame ſymptoms occaſionally ariſe from a venereal affection, likewiſe in conſequence of taking cold; and they are often connected with a conſiderable degree of fever. This diſeaſe requires early and particular attention, otherwiſe matter may form in the part, and the ſubſtance of the teſticle may be injured or deſtroyed. As ſoon therefore as the teſticle is inflamed, the man ſhould confine himſelf to his bed, and apply ten or twelve leeches to the ſcrotum.* When the bleeding has ceaſed,

* If leeches cannot be procured, it may be adviſeable, eſpecially in robuſt habits, to let blood from the arm, or from the veins of the ſcrotum.

a poultice

a poultice, confiſting of Goulard's water and linſeed, muſt be applied, and renewed three times in twenty-four hours. It will alſo be proper to give a purgative, conſiſting of 5 grains of calomel, mixed with treacle or honey, at bed-time, and 30 grains of jalap, with an equal quantity of cream of tartar, in the morning. This phyſic may be repeated once in three days, until the inflammation be ſubdued. When the man is able to riſe and walk about, he ought to wear a bag-truſs, and waſh the ſcrotum, or bag which contains the teſticles, with brandy, two or three times a day. If matter ſhould form, the poultice muſt be continued until the part be nearly healed, when a little dry lint and cerate will complete the cure.

FINIS.

[W. Phillips, Printer.]